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Knowledge and Support Technical Assistance
Strengthening the Capacity for
Environmental and Climate Change Laws
in Asia and the Pacific

TRAIN-THE-TRAINERS PROGRAM

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Dear Participants,

As part of this training program, we are delighted to share with you a number of research articles and book chapters (reading list) which have been recommended by the speakers who have been invited to share their insights as part of the Sessions in this program.

Each of the readings has a comment which includes the name of the speaker who has recommended this reading and in some cases the reasons for their recommendation.

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We hope you enjoy this collection of readings and find it useful.

With best regards,

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Reading List

1. Adelman, S. (2013). Rio+20: Sustainable injustice in time crises. *Journal of Human Rights and the Environment*, 4(1), 6-31.
2. Baxi, Upendra (2020) *The Future of Dissent in the Anthropocene, Mainstream*.
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5. Guha, R. (2001). *The Prehistory of Community Forestry in India*, *Environmental History*, 6(2), 213-238.
6. Lele, S. (2020). *Environment and Well-Being: A Perspective from the Global South*, *New Left Review*, 123, 41-63.
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9. Munshi, I. (2005) *Scheduled Tribes Bill, 2005*, 40(41) 4406-4409.
10. Munshi, I. (2007). *Adivasi Life Stories: Context, Constraints and Choices*
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12. Rajamani, L. (2007) *Public Interest Environmental Litigation in India*, 19(3), 293-321.
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14. Ramesh, M.K. (2001) *Environmental justice delivery in India: In context*, *Indian Journal of Environmental Law*, 2(2), 9-26.
15. Rosencranz, A and Lele, S. (2008) *Supreme Court and India's Forests*, *Economic and Political Weekly*.
16. Roy, Suryapratim (2017) *Situating the Individual within Climate Law: A Behavioural Law and Economics Approach to End-user Emissions Trading*, Ph.D. thesis, University of Groningen.

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MLA 8th ed.

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OSCOLA 4th ed.

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Rio+20: sustainable injustice in a time of crises

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This article argues that Rio+20 failed because it replicated the failings of sustainable development in the form of green economy. Against a backdrop of discrete but overlapping crises, including the global economic crisis, climate change and a growing crisis of food insecurity, the final text seemed oblivious to the slow wearing out of neoliberalism, dogmatically insisting on the panacea of market-based solutions to climate change and environmental destruction.¹ As such, the text symbolizes the epistemological crisis of technoscientific Eurocentric rationality. Using Walter Mignolo's concept of coloniality and Boaventura de Sousa Santos's call for the cultivation of an ecology of knowledges, this article examines the transformative potential of subaltern forms of jurisprudence, such as the People's Agreement on Climate Change and the Rights of Mother Earth. It argues that a significant epistemological shift is required to enable humanity to confront the injustices perpetuated by the vision embodied in the Rio+20 final document.

Keywords: sustainable development, green economy, neoliberalism, coloniality, ecology of knowledges, indigenous knowledge, climate justice

1 INTRODUCTION

Rio+20 was a double failure. First, it offered vague aspirations rather than concrete solutions to climate change, species extinction and environmental destruction. This reflected a second and more profound failure, because the summit further entrenched the erroneous idea that the solution to the environmental crisis lies in the self-same neoliberal ideology that has intensified the crisis during the past 40 years. This article argues that the outcome of Rio+20 should be understood against the backdrop of the overlapping crises that characterize this historical conjuncture, offering a critique of Rio+20 in that context, but focusing upon the epistemological crisis now facing neoliberalism (which here is unambiguously linked with climate injustice and colonial patterns of oppression and exploitation). After exposing the failure of Rio+20 to deliver a much needed paradigm shift, I critique sustainable development and the 'green economy' as neoliberal artefacts legitimating 'business as usual' before discussing the epistemological contributions of the global South to the search for urgently needed alternative modes of thinking about our ways of knowing and being in the world.

* I would like to thank the editors and anonymous reviewers of the Journal for their critique and comments on this work. In particular, I would like to thank Evadne Grant, Karen Morrow and Anna Gear for their extensive editorial engagement with this article. Any errors remain mine alone.

1. C Crouch, *The Strange Non-Death of Neoliberalism* (Polity, Cambridge 2012) 163.

By resisting the emergence of alternative ontologies and epistemologies, Eurocentric thinking forecloses the very possibility of climate justice.

2 AN AGE OF CRISES

We live in precarious times dominated by a global economic slump and a climate calamity in which the absolute limits of the biosphere are in danger of being breached.² It is a period of uncertainty in which, as Boaventura de Sousa Santos puts it, strong questions tend to find weak answers.³ The climate crisis is best understood as a series of discrete but overlapping and mutually reinforcing crises. It is a crisis of capitalism and a crisis of capitalism's environment.⁴ However, the global economic crisis has provided policy makers with yet another pretext for underemphasizing the urgency of the climate crisis – on the spurious grounds that rescuing banks is more important than saving the planet and that paying down sovereign debt is a higher moral imperative than dealing with ecological debt. The highest priority seems to be a return to the unsustainable patterns of production and consumption responsible for global warming. The climate crisis has to be addressed in the midst of the deepest global economic crisis in a century, while the economic system itself perpetuates negative feedback loops and fuels the looming energy and food crises: global warming is contributing to a steadily growing food crisis, aggravated by neoliberal economic policies, financial speculation and an overlapping energy crisis.⁵ The food crisis reflects a range of converging climate-driven factors and unsustainable policy choices. In sub-Saharan Africa for example, food insecurity is exacerbated by a perverse combination of flooding and drought, while Western economic policies, consumption patterns and energy needs encourage the use of agricultural land for biofuels or meat production rather than the production of food for direct human consumption. Moreover, extensive land grabbing and growing speculation in agricultural commodities have undermined the precarious food sovereignty of millions in the global South.⁶

2. To cite but one example, the concentration of CO₂ in the atmosphere has increased by 9 per cent since the 1992 Earth summit (UNEP, *Keeping Track of Our Changing Environment: From Rio to Rio+20 (1992–2012)* (UNEP, Nairobi 2011) 28. The European Environment Agency notes that 'European environmental policies appear to have had a clearer impact on improving resource efficiency than on maintaining ecosystem resilience' and that improving resource efficiency 'may not be sufficient to ensure a sustainable natural environment' (European Environment Agency (EEA), *Environmental Indicator Report 2012: Ecosystem Resilience and Resource Efficiency in a Green Economy in Europe* (2012) 10). See J Foley *et al.*, 'Boundaries for a Healthy Planet' (2009) 302 *Scientific American* (April 2010) 54–7 and the 2009 issue on planetary boundaries in *Nature* 461, 472–5.

3. B de Sousa Santos, 'A Non-Occidental West? Learned Ignorance and Ecology of Knowledge' (2009) 26(7–8) *Theory Culture and Society* 103–25. I am grateful to Boa for his insights and his comments on an earlier draft of this paper.

4. Gills argues that the global financial and economic crises are one aspect of a larger multi-dimensional set of crises, principally an accumulation crisis, a world systemic crisis and a civilizational crisis. BK Gills, 'Going South: Capitalist Crisis, Systemic Crisis, Civilisational Crisis' (2010) 31(2) *Third World Quarterly* 169–84.

5. S Daniel (with A Mittal), *The Great Land Grab: Rush for World's Farmland Threatens Food Security for the Poor* (Oakland Institute, Oakland 2009) 18.

6. See C Smaller and HA Mann, *Thirst for Distant Lands: Foreign Investment in Agricultural Land and Water* (International Institute for Sustainable Development, Winnipeg 2009);

This overlaps with an intensifying water crisis caused by the doubling of the world's population and by the quadrupling of water consumption over the past 40 years, during which the overall amount of water on Earth, including that available for human consumption (1 per cent), has remained the same.⁷ Meanwhile, the energy crisis paradoxically appears as both a dearth (leading to intensified competition for existing carbon resources) and a surfeit of fossil fuels (as the melting polar ice cap and new technologies such as fracking and deep sea drilling make it possible to exploit previously inaccessible oil and gas reserves).

These overlapping crises in turn increase poverty and inequality, intensify existing injustices and perpetrate new ones, not least against the many impoverished millions in the global South who are least responsible for global warming and have the fewest resources for climate adaptation and mitigation.⁸ Although climate change affects everyone, it compounds pre-existing forms of domination and exploitation such as class, race and patriarchy.⁹ It is the greatest threat facing humanity. As James Hansen puts it, 'Planet Earth, creation, the world in which civilization developed, the world with climate patterns that we know and stable shorelines, is in imminent peril'.¹⁰

3 EPISTEMOLOGY AND SCIENCE IN AN AGE OF CRISIS

These material crises are reflections of an underlying epistemological crisis manifested primarily in the persistence of the exhausted ideology of neoliberalism and (albeit to a lesser extent) technoscientific approaches to climate change.¹¹ The paradox of neoliberalism is demonstrated by the dogmatic insistence of its proponents that the monetization and marketization of natural resources is the solution to environmental destruction rather than a major driver of it.

The mainstream liberal literature on the ethics of climate justice generally attributes duties according to the historical responsibility of developed countries for carbon emissions, the cumulative benefits they have derived from unconstrained fossil-fuelled industrialization, and their capacity to provide the funds required to enable

R Hall, 'The Many Faces of the Investor Rush in Southern Africa: Towards a Typology of Commercial Land Deals' (2011) ICAS Review Paper Series No. 2 February, 2011 and Daniel (n 5). On the growing food crisis, see War on Want (2012), 'Food Sovereignty: Reclaiming the Global Food System', <<http://www.waronwant.org/attachments/Food%20sovereignty%20report.pdf>> accessed 3 September 2012.

7. R Harrabin, 'Shortages: Water Supplies in Crisis', *BBC* 19 June 2012 <<http://www.bbc.co.uk/news/science-environment-18353963>> accessed 26 August 2012. For an analysis of the implications of the looming crisis, see E Brown Weiss, 'The Coming Water Crisis: A Common Concern of Humankind' (2012) 1(1) *Transnational Environmental Law* 153–68.

8. On the effect of global warming on the poor, see the World Bank <<http://climatechange.worldbank.org/content/climate-finance-and-world-bank-facts>> accessed 15 August 2012.

9. On the gendered impact of global warming, see for example A Agostino and R Lizarde, 'Gender and Climate Justice' (2012) 55(1) *Development* 90–95.

10. J Hansen, *Storms of My Grandchildren: The Truth about the Coming Climate Catastrophe and Our Last Chance to Save Humanity* (Bloomsbury, London 2009) ix.

11. Despite its contribution to the biggest global economic crisis in a century, neoliberalism seems to live on in an un-dead state: See J Peck, N Theodore and N Brenner, 'Neoliberalism Resurgent? Market Rule after the Great Recession' (2012) 111(2) *South Atlantic Quarterly* 265–88; G Duménil and D Lévy, *The Crisis of Neoliberalism* (Harvard University, Cambridge 2011); Crouch (n 1).

less developed states to adapt to climate change and to mitigate its effects.¹² The principle of common but differentiated responsibility underpins the supposedly legally binding – but nonetheless ignored – obligations of states under the Kyoto Protocol.¹³ However, this mainstream literature largely fails to address the historical legacies of colonialism and the structural reasons why many countries in the global South lack the infrastructure and resources required for adaptation and mitigation. The Washington Consensus was emblematic of the neoliberal ideology that has predominated since its emergence in the late 1970s.¹⁴ Promoting free trade, aid conditionalities and one-size-fits-all structural adjustment programmes in the global South, it encapsulated the neoliberal dogma that has increased inequality, disempowered local communities and deepened climate injustice.¹⁵

While the discrediting of neoliberalism is a form of progress, such progress heightens awareness of the absence of viable alternatives: misplaced faith in counterproductive economic policies is matched by hopes that untried, untested and potentially dangerous or as yet theoretical technological ‘magic bullets’ such as geo-engineering will come to the rescue.¹⁶ Science, of course, enables us to comprehend the scale and dimensions of the climate crisis and will be crucial in developing technologies to avoid catastrophic global warming, but is only one way of knowing the world amongst many. Science becomes problematic when used to construct hegemonic depoliticized versions of truth and reality that foreclose other ways of knowing. While science provides crucial evidence of global warming and indicates solutions, it cannot provide conclusive answers to difficult ethical and political questions. Jasanoff argues that science can help us discover what we need to know but cannot tell us how we need to be. Science is not the *only*, or even the *primary*, way in which we experience climate crisis – we bring a wide range of experiential, epistemic, ethics-based, aspirational and normative convictions to our frameworks of understanding. It follows that durable representations of the environment ‘do not arise from scientific activity

12. See the following on attributing responsibility for causing global warming and providing resources for adaptation and mitigation: EA Page, *Climate Change, Justice and Future Generations* (Edward Elgar, Cheltenham 2006); S Vanderheiden, *Atmospheric Justice: A Political Theory of Climate Change* (Oxford University Press, Oxford 2008); J Moss, ‘Climate Justice’ in J Moss, *Climate Change and Social Justice* (Melbourne University Press, Melbourne 2009); P Harris, *World Ethics and Climate Change: From International to Global Justice* (Edinburgh University Press, Edinburgh 2009). On the ethics of climate change in general, see SM Gardiner, *A Perfect Moral Storm: The Ethical Tragedy of Climate Change* (Oxford University Press, Oxford 2011).

13. The UN Framework Convention on Climate Change was negotiated at the 1992 Earth Summit. It includes the 1997 Kyoto Protocol.

14. The Washington Consensus was a suite of market fundamentalist policies imposed on developing countries by the international financial institutions. See J Stiglitz, *Globalization and its Discontents* (Allen Lane, London 2002) and N Serra and JE Stiglitz (eds), *The Washington Consensus Reconsidered: Towards a New Global Governance* (Oxford University Press, Oxford 2008).

15. On the impact of the Washington Consensus on developing countries, see J Neederveen Pieterse, *Development Theory: Deconstructions/Reconstructions* (Sage, London 2010). On the implications of skewed economic growth and inequality, see R Wilkinson and K Pickett, *The Spirit Level: Why Equality is Better for Everyone* (Penguin Books, London 2010).

16. On the potential and risks of geo-engineering, see the 2009 Royal Society report *Geoengineering the Climate: Science, Governance and Uncertainty* (Royal Society, London 2008) <http://royalsociety.org/uploadedFiles/Royal_Society_Content/policy/publications/2009/8693.pdf> accessed 30 August 2012.

alone, through scientists' representations of the world as it *is*, but are sustained by shared normative and cultural understandings of the world as it *ought* to be'.¹⁷ Indeed, problems arise when the epistemological claims of science are detached from cultural practices that confer normative authority and therefore risk becoming illegitimate. It is accordingly especially important to attend to the hegemonic Western cultural perspectives that, in averring indisputable truths, constitute the forms of epistemicide that currently facilitate ecocide.¹⁸ In essence, the epistemological crisis underlying the material crises of our age arises, in part, from the silencing and marginalization of heterodox thought that exposes the immanent contradictions in the hegemonic discourse and suggests alternative ways of understanding and combating the climate crisis.¹⁹ Finding solutions, therefore, will depend upon dethroning science – whilst not denying it.²⁰

4 HEGEMONIC NEOLIBERAL 'KNOWLEDGES': FROM 'SUSTAINABLE DEVELOPMENT' TO 'GREEN ECONOMY' TO 'EPISTEMOLOGICAL CRISIS'

Despite mounting evidence of the spuriousness of neoliberalism's insistence on the infallibility of markets, the green economy emerged as the leitmotif of Rio+20. The final text of the outcome document, 'The Future We Want', promotes the green economy as evidence of a renewed 'commitment to sustainable development and to ensuring the promotion of an economically, socially and environmentally sustainable future for our planet and for present and future generations' (para. 1).²¹ In reality, the green economy concept is designed to mask or displace attention from the failure of markets to provide viable solutions to the climate crisis, the epistemological bankruptcy of market fundamentalism and the resistance of the hegemonic discourse to alternative ways of understanding and addressing the climate crisis offered by traditional knowledges.²² Like sustainable development, the green economy approach seeks to elide

17. S Jasanoff, 'A New Climate for Society' (2010) 27(2–3) *Theory, Culture & Society* 233–53.

18. On the campaign to include ecocide as the fifth crime against peace in the Rome Statute of the International Criminal Court, see P Higgins, *Eradicating Ecocide: Exposing the Corporate and Political Practices Destroying the Planet and Proposing the Laws Needed to Eradicate Ecocide* (Shepherd-Walwyn, London 2010) and P Higgins, *Earth is Our Business: Changing the Rules of the Game* (Shepherd-Walwyn, London 2012).

19. These are discussed in section 3 below.

20. M Antaki, 'The Turn to Imagination in Legal Theory: The Re-Enchantment of the World?' (2012) 23 *Law and Critique* 1–20 at 5: In Antaki's words, '[m]odern science and its resolute will to truth are not the overcoming of disenchantment but, rather, its consummation'.

21. United Nations Conference on Sustainable Development, Rio de Janeiro, 20–22 June 2012.

22. 'The Future We Want', General Assembly Resolution A/RES/66/288 adopted 27 July 2012 <<http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/476/10/PDF/N1147610.pdf?OpenElement>> accessed 25 September 2012. The conference was a failure even by the low standards set by the COP conferences in Copenhagen, Cancun and Durban that were unable to negotiate a successor to the Kyoto Protocol. It was agreed to begin talks on sustainable development goals to augment the millennium development goals without indicating what they might look like. The final document recognizes that sustainable development goals 'could also be useful for pursuing focused and coherent action on sustainable development' (para. 246). It 'recognizes' a great deal (the word appears 148 times) but requires very little.

the irrefragable contradiction between the expansionary logic of capitalism and the absolute limits of nature. It ignores the fact that we are

consuming nature's services ... 44 per cent faster than nature can regenerate and reabsorb what we consume and the waste we produce ... [I]t takes the Earth almost 18 months to produce the ecological services that humanity uses in one year. The UK's footprint has grown such that if the whole world wished to consume at the same rate it would require 3.4 planets like Earth.²³

In the light of this irrefutable reaching of biomaterial limits, Barry argues that an ecological crisis of capitalism erupts when 'the ecological crisis *within* capitalism cannot be contained by the logic of displacement'²⁴ – when the realization dawns that existing patterns of production and consumption constitute a problem that can no longer be minimized or denied. Promoting the idea of the green economy is a form of displacement that pretends that market solutions have not yet worked because they have not yet been allowed to.

4.1 From sustainable development ...

Sustainable development gained traction in the run-up to the 1992 Earth summit in Rio de Janeiro.²⁵ Based on the definition provided by the Brundtland Commission, sustainable development was promoted as the formula for achieving intra-generational justice by eliminating poverty without imposing unfair obligations on future generations (inter-generational justice).²⁶ Emerging as neoliberalism was entering its prime, sustainable development offered the possibility of integrating economic development, social justice and environmental protection in a virtuous circle on the one hand, and a means of overcoming the physical limits of the biosphere through market solutions on the other. Wolfgang Sachs described the concept as an oxymoron on the basis that endless economic growth and environmental sustainability are intrinsically contradictory.²⁷

Sustainable development was incorporated in numerous international environmental instruments. It provided the foundation of the cap and trade system at the centre of the Kyoto Protocol. It promised 'nothing less than to square the circle: to identify a type of development that promotes both ecological sustainability and international justice'.²⁸ Sustainable development discourse is conspicuously silent, however, on how this is to be achieved within existing power structures and how it is to address entrenched social and economic inequalities such as gendered access to income and resources that they generate and perpetuate. It has been widely criticized as being

23. A Simms and V Johnson, *Growth Isn't Possible: Why We Need a New Economic Direction* (New Economics Foundation, London 2010) at 5.

24. J Barry, 'Marxism and Ecology' in A Gamble, D Marsh and T Tant (eds), *Marxism and Social Science* (MacMillan, London 1999).

25. United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 3–14 June 1992. In addition to the two generational principles, sustainable development is based on integration and sustainable use.

26. The commission defined it as humanity's ability to meet 'the needs of the present without compromising the ability of future generations to meet their own needs' (World Commission on Environment and Development (WCED), *Our Common Future* (Oxford University Press, Oxford 1987) 8).

27. W Sachs, *Planet Dialectics: Explorations in Environment and Development* (Zed Books, London 1999).

28. *Ibid.*, at 76.

vague and ambiguous.²⁹ Treating nature as capital and the global South as an arena of structural and ecological adjustment, sustainable development discourse and practice has exacerbated the crises of justice and nature that have resulted from the fetishization of Gross Domestic Product (GDP) as being the index of development. Amongst other things, GDP does not measure wealth distribution, quality of life, standard of living or intangible values closely associated with the environment. As Stiglitz, Sen and Fitoussi observe, GDP does not measure large changes in inequality, although '[i]f inequality increases enough relative to the increase in average per capital GDP, most people can be worse off even though average income is increasing'.³⁰ Nevertheless, GDP is still treated as an almost sacrosanct index of national economic virility.³¹ The difficulty facing economists like Tim Jackson (who suggests that it is possible to achieve prosperity without growth) and Herman Daly (who advocates steady state economics) is that growth is fundamental to any form of capitalism.³²

4.2 ... to 'green economy' ...

While the Rio+20 text recognizes 'the need for broader measures of progress to *complement* gross domestic product in order to better inform policy decisions' (para. 38; my emphasis) it does not indicate what they might be. The scale of the problem is demonstrated by the consensus in mainstream economics between Hayek's disciples – the so-called 'Austerians' – and neo-Keynesians that growth is the self-evident solution to the global economic crisis, no matter how environmentally damaging it is.³³ Future technologies may ameliorate catastrophic warming but environmental destruction will continue apace so long as fossil-fuelled industrialization and Western consumption patterns continue to be globalized. Despite these realities, the debate occurs in an a-contextual place in which the inexorable consequence of unfettered growth, the destruction of the material basis of all economic activity, is conjured away – a place where the cause of the environmental crisis is also its solution.

29. DB Macgregor and LD Hawke, 'Sustainable Development' in D Bodansky, J Brunnée and E Hey (eds), *Oxford Handbook of Environmental Law* (Oxford University Press, Oxford 2007) 621 ask whether 'the concept is so vague as to be meaningless and not of any practical use'. See Connelly's defence of the inevitable ambiguity of the concept: S Connelly, 'Mapping Sustainable Development as a Contested Concept' (2007) 12(3) *Local Environment* 259–78.

30. JE Stiglitz, A Sen and J-P Fitoussi, *Report by the Commission on the Measurement of Economic Performance and Social Progress* (2009) <http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf> accessed 22 September 2012.

31. Indices of happiness and wellbeing are being adopted in several countries but are unlikely to supplant GDP in the near future (see JD Sachs, JF Helliwell and R Layard (eds), *World Happiness Report* (Earth Institute; Columbia University, New York 2012) for an example of the rapidly expanding literature). In the UK, for example, the Office of National Statistics published the results of its inaugural subjective wellbeing annual population survey in July 2012 (<<http://www.ons.gov.uk/ons/guide-method/user-guidance/well-being/publications/index.html>> accessed 24 July 2012).

32. T Jackson, *Prosperity Without Growth: Economics for a Finite Planet* (Earthscan, London 2009); H Daly, *The Steady State Economy* (WC Freeman and Co Ltd, London 1972) and H Daly, *Beyond Growth* (Beacon Press, Washington DC 1996).

33. Credit, debt and growth are hardwired into capitalist legal systems. For example, 'neo-liberal economies typically put legal obligations on publicly listed companies to grow. They make the maximisation of returns to shareholders the highest priority for management. As major investors are generally footloose, they are free to take their money wherever the highest rates of return and growth are found' (Simms and Johnson (n 23) at 14).

In the run-up to Rio+20, the United Nations Environment Programme (UNEP) encouraged policy makers to embrace the green economy as a new development path ‘based on sustainability principles and ecological economics’. It asserted that this ‘new economic paradigm’ would end an ‘era of capital misallocation’ and usher in the more efficient use of natural resources and wealth.³⁴ Accordingly, the Rio+20 outcome reproduces and intensifies the failings of sustainable development in the form of the green economy³⁵ – a deceptively alluring fairy tale in which the price mechanism and market forces save the planet. Like the serial failures to negotiate a binding successor to the Kyoto Protocol, this brings to mind Einstein’s observation that insanity is repeating the same thing over and over again while expecting different results. The crux of the green economy as conceived in the Rio+20 process (and which is as vague and imprecise as ‘sustainable development’) seems to be that nature must be sold in order to save it; it ‘... must pay its way. It must produce the value that keeps it afloat’.³⁶ According to this logic:

once natural capital turns up on balance sheets in the same way as man-made capital, then CEOs and policy makers will adopt greener ways. Natural capital accounting should mean environmental protection is seen as an investment, rather than a cost ... Corporations will husband resources better, while governments will switch taxation onto resource use and pollution rather than economic activity itself.³⁷

The concept of green economy embeds the idea that economy–environment contradictions can be overcome ‘not by ring fencing the non-human world (e.g. through state protection) but by bringing it more fully within the universe of capital accumulation. What its advocates call “free market environmentalism” is a set of ideas and practices that aim to conserve resources and ecosystems by allowing them to be privatised and marketised’.³⁸ By cementing into place the idea of nature as an exploitable resource – in other words as natural capital – Rio+20 deepened the epistemological fallacies that produced sustainable development at the Earth summit.

The Stern Review described climate change as ‘the greatest and widest-ranging market failure ever seen’ because neither the cap-and-trade system at the heart of the Kyoto Protocol or carbon taxes have succeeded in reducing carbon emissions.³⁹ Nor has the Clean Development Mechanism, which enables corporations in the

34. UNEP, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication* (A Synthesis for Policy Makers) (UNEP, Nairobi 2011) 14, 2. Part of this agenda includes the endorsement of so-called ‘ecosystem services’ approaches: ‘In the transition to a Green Economy, policymakers should ensure that the full range of goods and services provided by ecosystems, including those which are currently non-monetised, are fully integrated in decision making and public policy’ (ibid., at 3).

35. Brand suggests that the green economy concept is as oxymoronic as sustainable development: U Brand, ‘Green Economy – the Next Oxymoron? No Lessons Learned from Failures of Implementing Sustainable Development’ (2012) 21(1) *GAIA* 28–32.

36. J Fairhead, M Leach and I Scoones, ‘Green Grabbing: a New Appropriation of Nature?’ (2012) 39(2) *Journal of Peasant Studies* 237–61 at 245.

37. F Pearce, ‘Beyond Rio, Green Economics Can Give Us Hope’, *The Guardian* 28 June 2012 <<http://www.guardian.co.uk/environment/2012/jun/28/rio-green-economics-hope>> accessed 24 July 2012.

38. N Castree, ‘Neoliberalising Nature: the Logics of Deregulation and Reregulation’ (2008) 40(1) *Environment and Planning* 131–52, 146–7.

39. N Stern, *The Economics of Climate Change: The Stern Review* (Cambridge University Press, Cambridge 2007) at i.

developed world to offset their emissions without reducing poverty in the global South, or the European Union's carbon trading scheme (EU ETS), which has failed to reflect the true social cost of carbon.⁴⁰ Indeed, these mechanisms have proved so vulnerable to fraud and/or corruption that they seem to have been designed to fail.⁴¹ Yet, despite the realities, proponents of the green economy insist that a market calculus is the best way of dealing with climate change.⁴²

Rio+20 accordingly endorses the prevailing hegemonic mythology. The final text *encourages* 'each country to consider the implementation of green economy policies ... in a manner that *endeavours* to drive sustained, inclusive and equitable economic growth and job creation, particularly for women, youth and the poor' (para. 61; my emphases). The document repeatedly refers to equitable and inclusive sustainable economic growth as being imminently achievable, as if the inequitable distribution of wealth were an illusion.⁴³

Inequality, including economic inequality, exacerbates the effects of global warming – the poor are especially vulnerable and have the fewest resources for adaptation and mitigation. Yet, despite this, and revealingly, the term 'inequality' appears only twice in the 24,502 words in the Rio+20 document.⁴⁴ This omission reveals the vapid-ity of the Rio+20 text's declaration that the:

green economy in the context of sustainable development and poverty eradication ... could provide options for policymaking but should not be a rigid set of rules. We emphasize that it should contribute to eradicating poverty as well as sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for

40. The Social Cost of Carbon (SCC) measures the full cost of an incremental unit of carbon (or greenhouse gas equivalent) emitted today in order to calculate the full cost of the damage it causes while it remains in the atmosphere. A recent study estimated that the true SCC may be as high as USD 266: LT Johnson and C Hope, 'The Social Cost of Carbon in US Regulatory Impact Analyses: an Introduction and Critique' (2012) 2 *Journal of Environmental Studies and Sciences* 205–21, 214.

41. EU ETS has a mixed record. Its first phase was not a success: the vast oversupply of permits led to the price of carbon dropping to almost zero and emissions covered by the scheme rose by 0.8%. (Open Europe, 'Europe's Dirty Secret: Why the EU Emissions Trading Scheme Isn't Working', August 2007 3 <<http://www.openeurope.org.uk/Content/Documents/PDFs/etsp2.pdf>> accessed 1 October 2012). The EU is addressing these problems but the scheme will remain problematic as long as the low price of carbon fails to stimulate investment in green technologies. See also C Kneteman and A Green, 'The Twin Failures of the CDM: Recommendations for the "Copenhagen Protocol"' (2009) 2(1) *The Law and Development Review* 224–56; T Gilbertson and O Reyes, *Carbon Trading: How it Works and Why it Fails* (Dag Hammarskjöld Foundation, Uppsala 2009).

42. See T-H Jo, L Chester and MC King, 'Beyond Market-fundamentalist Economics: an Agenda for Heterodox Economics to Change the Dominant Narrative' (2012) 20(3) *On the Horizon* 155–63 for an analysis of the failure of neoclassical economics and the failure of markets to provide solutions to global warming.

43. 'Economic inequality has re-emerged as a central policy concern in the wake of the global crisis, as the past three decades have witnessed rising global inequalities over periods of both growth and slump': UNCTAD, *Trade and Development Report 2012* (United Nations, New York and Geneva) 31.

44. Wilkinson and Pickett (n 15) demonstrate the negative correlation between increasing inequality and individual wellbeing in the developed world. On the relationship between neoliberalism and rising social inequality, see D Harvey, *The Enigma of Capital and the Crises of Capitalism* (Profile Books, London 2010) and Duménil and Lévy (n 11).

employment and decent work for all, while maintaining the healthy functioning of the Earth's ecosystems (para. 56).

The green economy discourse reflects the emergence of what Kingsnorth calls neo-environmentalism, which dismisses traditional green thinking as naïve and views new technologies, global capitalism and western-style development as being a solution to the climate crisis. He argues that '[l]ike the neoliberals, the neo-environmentalists are attempting to break through the lines of an old orthodoxy which is visibly exhausted and confused. Like the neoliberals, they speak the language of money and power ... Like the neoliberals they think they have radical solutions'.⁴⁵ Such approaches reflect a pervasive, reductive trend in which a market mentality has become entrenched in everyday life.⁴⁶ Under the pervasive logic of neoliberalism, nature is subjected to a cost-benefit analyses under which 'anything – not only nature, but also human life – turns into a variable that can in principle be traded off against something else'.⁴⁷ There is thus a risk that climate change will be seen as just one more cost to be paid off rather than a singularly hazardous threat to all life on earth.

It is salutary, in the light of the emergence of neo-environmentalism, to remember that neoliberalism itself 'came to prominence by triumphing over ... 30 previous years of declining social and economic inequality and growing attention to social needs and collective goals [in most OECD countries]'.⁴⁸ Consistent with this dynamic, four years after the credit crunch and the financial implosion precipitated by the collapse of Lehman Brothers, the Rio+20 text paradoxically suggests that neo-liberalism is at the apex of its domination even as its slow disintegration becomes apparent in the throes of its drawn-out collapse. This throws revealing light upon the emergence of neo-environmentalism as being a manifestation of neoliberalism's plasticity and resilience. Monbiot argues that:

The neoliberal hypothesis has been disproved spectacularly. Far from regulating themselves, untrammelled markets were saved from collapse only by government intervention and

45. P Kingsnorth, 'The New Environmentalism: Where Men Must Act "As Gods" to Save the Planet', *The Guardian* 1 August 2012 <<http://www.guardian.co.uk/commentisfree/2012/aug/01/neogreens-science-business-save-planet>> accessed 15 August 2012. A good example is provided by Tony Juniper, former chief executive of Friends of the Earth, who argues that we must put a price on nature in order to save it (*The Guardian* 10 August 2012 <<http://www.guardian.co.uk/environment/2012/aug/10/nature-economic-value-campaign?INTCMP=SRCH>> accessed 15 August 2012).

46. Sandel seems surprised at the degree to which 'the last few decades have witnessed the remaking of social relations in the image of market relations': M Sandel, *What Money Can't Buy: The Moral Limits of Markets* (Allen Lane, London 2012). This contrasts the argument of Nobel economics laureate Gary Becker that the belief that 'the economic approach is a comprehensive one that is applicable to all human behaviour' exemplifies the neoclassical fallacy that human beings are nothing more than rational, omniscient, utility maximizing market actors making endless cost-benefit analyses: GS Becker, *The Economic Approach to Human Behavior* (University of Chicago Press, Chicago 1976) at 8.

47. Sachs (n 27) at 81–2. Depending on one's level of cynicism, it may be argued that sustainable development has succeeded from a corporate perspective in that a '1980s term that was formerly emancipatory and critical of the system has been absorbed by Realpolitik and the economy, as well as ruling institutions and mindsets, and associated with meanings and reform option that are acceptable to them': B Unmüßig, W Sachs and T Fatheuer, *Critique of the Green Economy: Toward Social and Environmental Equity* (Heinrich Böll Foundation, Berlin 2012) at 23.

48. Crouch (n 1) at 162.

massive injections of public money ... Yet this very crisis is now being used as an excuse to apply the doctrine more fiercely than before.⁴⁹

In a similar vein, Crouch repudiates the neoliberal fallacy that states and markets are always at odds – revealing the extent of neoliberal hegemony residing in the fact that states and markets have operated in tandem to serve the interests of transnational corporations, financial institutions and a narrow group of plutocrats and kleptocrats, the so-called 1%.⁵⁰

Meanwhile, the mounting evidence of the bankruptcy of neoliberalism (sub-prime mortgages, toxic derivatives, the European sovereign debt crisis, Libor rigging and money laundering by banks) only heightens the perversity of UNEP's assertions that green economy rests on 'the growing recognition that achieving sustainability rests almost entirely on getting the economy right'. It also undermines the plausibility of UNEP's view that an 'inescapable trade-off between environmental sustainability and economic progress' is little more than a myth.⁵¹

The green economy concept will undoubtedly facilitate the emergence of a bio-economy that uses 'technological innovation to enhance efficiency and the use of natural resources for food, energy, pharmaceuticals and the chemicals industry'.⁵² Already a

handful of large transnational corporations in the USA, Europe, Japan, China and other Asian economies are striving to gain strategic control of entire value chains – genetic and technical information, production processes, and production factors such as energy, biomass, water and land.⁵³

However, these developments cannot realistically be seen as being anything other than a consolidation of 'business as usual'. Indeed, as the global economic crisis deepened, finance capital 'discovered agriculture, soil, infrastructure, and environmental protection as a new field of investment, thereby creating opportunities for a few, threatening the living conditions of many, particularly in the global South'.⁵⁴ It is hardly progressive that ecosystems are being sold and that the 'commodification of nature, and its appropriation by a wide group of players, for a range of uses – current, future and speculative – in the name of "sustainability", "conservation" or "green" values is accelerating'.⁵⁵ The commodification, financialization and privatization of nature envisaged by the green economy approach will inevitably and invariably redound to the disadvantage of ecosystems and the poor and vulnerable, increasing inequality and exacerbating injustice.

If the movement from sustainable development to a green economy constitutes the perpetuation of 'sustainable injustice' from one perspective, from a different standpoint, it reflects the success of an ideology. As Castree argues, neoliberalism

49. G Monbiot 'Our Economic Ruin Means Freedom for the Super-rich', *The Guardian* 30 July 2012 <<http://www.guardian.co.uk/commentisfree/2012/jul/30/economic-ruin-super-rich-totalitarian-capitalism>> accessed 30 July 2012.

50. Crouch (n 1) at 145.

51. UNEP (n 34) at 16 – referring to this view as a 'widespread myth'.

52. UnmüBig *et al.* (n 47) at 30. Rajan describes the operation of biocapital in the circuits of land, labour and value and its relationship to biopower (KS Rajan, *Biocapital: The Constitution of Postgenomic Life* (Duke University Press, Durham and London 2006) at 78.

53. UnmüBig *et al.* (n 47) at 32.

54. Brand (n 35) at 28.

55. Fairhead *et al.* (n 36) at 237.

was always necessarily an environmental project having ‘the non-human world as a key part of its rationale’.⁵⁶

4.3 ... and epistemological crisis

An ideological crisis erupts when a hegemonic mode of thinking collapses under the weight of its own contradictions. In the interregnum in which the old is dying but the new is not yet born, its exponents, defying the evidence of decay, impose their dogma ever more intensively. This process is ideological precisely because it resists reason.⁵⁷ The crisis may last for a long time since, as Gramsci observed, ‘no social form is ever willing to confess that it has been superseded’.⁵⁸

The triumph of ideologies is measured by the extent to which they become naturalized, universalized and accepted as common sense. For more than 30 years, neoliberalism has presented privatization and liberalization as being virtues and market efficiency as being a self-evident truth. Sustainable development and the green economy are cut from the same ideological cloth – indeed, they operate as legitimating concepts entirely within the imperatives of neoliberal growth. Since ideologies are not self-sustaining, they require continuous legitimation in order to disguise gaps in their depictions of reality. Gramsci describes how dominant classes seek to disguise their cultural hegemony as being natural and inevitable.⁵⁹ Thus, Redclift argues that:

By incorporating the concept of ‘sustainability’ within the account of ‘development’, the discourse surrounding the environment is often used to strengthen, rather than weaken, the basic supposition about progress. Development is read as synonymous with progress, and made more palatable because it is linked with ‘natural’ limits, expressed in the concept of sustainability.⁶⁰

This produces the deeply problematic concatenation economic growth–development–progress–sustainability that reflects widely pervasive taken for granted assumptions about the relationship between economic activity and the environment based on an unsound epistemology.

Epistemological crises are characterized by ideological implosion and an inability to imagine a different way of being and knowing – the failure, as Shakespeare put it, to comprehend that ‘[t]here are more things in heaven and earth, Horatio, than are

56. Castree (n 38) at 143.

57. The Berkeley Earth project, partially funded by the Charles G Koch Charitable Foundation (a key backer of the climate sceptic Heartland Institute), conceded in a study released on 29 July 2012 that ‘the average temperature of the Earth’s land has risen by 1.5°C over the past 250 years. The good match between the new temperature record and historical carbon dioxide records suggests that the most straightforward explanation for this warming is human greenhouse gas emissions’ (<<http://berkeleyearth.org/pdf/berkeley-earth-press-release-july-29.pdf>> accessed 31 July 2012). This is unlikely to stop the witch-hunt of climate scientists by climate change deniers in the US and elsewhere.

58. Cited in TR Bates, ‘Gramsci and the Theory of Hegemony’ (1975) 36(2) *Journal of the History of Ideas* 351–66 at 364.

59. A Gramsci, *Selections from the Prison Notebooks* (trans and ed) Q Hoare and GN Smith (International Publishers, New York 1971).

60. M Redclift, ‘Sustainable Development: Needs, Values, Rights’ (1993) 2 *Environmental Values* 3–20 at 7.

dreamt of in your philosophy'.⁶¹ Whereas an ideological crisis can be tackled within the fracturing paradigm, an epistemological crisis can be resolved only *after* confrontation between initially exclusive forms of knowledge. Rio+20 deepens the epistemological crisis because it perpetuates the flawed ideology of neoliberalism. Regarding the limits of the ecosystem as an incidental problem rather than a fundamental constraint,⁶² Rio+20 repeats the refusal of the 1992 Earth summit to acknowledge the logical consequences flowing from the inherent tension between 'development' as (economic) *growth* on the one hand, and environmental *sustainability* on the other.

Neither the climate crisis or the epistemological crisis can be conjured away. While the epistemological crisis originated in Enlightenment rationality, it engulfs all forms of industrialized modernity.⁶³ Santos argues that science (which is epistemologically complicit with legal positivism) has colonized modern ideas of emancipation and been used to mask and to manage the excesses and deficits of modernity.⁶⁴ He maintains that lengthy transitions between social paradigms occur when 'the internal contradictions of the dominant paradigm cannot be managed with recourse to the mechanisms for conflict management and structural adjustment developed by the paradigm in question'. Unresolved excesses and deficits result in the delegitimation of prevailing structures as their internal contradictions become apparent: 'paradigmatic transitions, once set in motion, are indeterminate, move towards uncertain outcomes [but, crucially] ... open up to alternative futures'.⁶⁵ In his view, the crisis of modernity is a technoscientific crisis of Eurocentric rationality – a rationality producing possessive individuals for whom progress is measured by dominion over nature. For Santos, the 'paradigmatic transition we are undergoing started with the epistemological collapse of modern science ... and will entail a civilizational transformation' that appears unlikely at this juncture.⁶⁶ The contradictions of technoscience and capitalism are deepening while alternatives remain inchoate.

The current epistemological crisis is more than the wilful stupidity of climate deniers or mere cognitive dissonance; it represents an epochal failure of imagination. The limitations of the solutions posited in the Rio+20 text re-emphasize the urgent need for a different way of being in and knowing the world – the text is an archetypal instance of business as usual, an instantiation of Escobar's argument that the eco-developmental vision in mainstream expressions of sustainable development relies upon, and needs, an

epistemological and political reconciliation of ecology and economy ... intended to create the impression that only minor corrections to the market system are needed to launch an era of environmentally sound development, hiding the fact that the economic framework itself cannot hope to accommodate environmental concerns without substantial reform.⁶⁷

61. William Shakespeare, *Hamlet* Act 1, scene 5.

62. The final text does not even mention ecological limits.

63. This should not be taken to imply that the environmental records of non-capitalist states like the USSR and communist capitalist states like China are any better than those of Western countries.

64. B de Sousa Santos, *Toward a New Legal Commonsense* (2nd Ed) (Butterworths, London 2002) at 7.

65. *Ibid.*, at 64.

66. *Ibid.*, at 65.

67. A Escobar, 'Construction Nature: Elements for a Post-structuralist Political Ecology' (1996) 28 *Futures* 325–43 at 330.

In this light, sustainable development and the green economy stand revealed as being quintessential forms of hegemonic knowledge combining Enlightenment rationality, anthropocentrism and neoliberalism in a weak form of sustainability that promotes the reformist techno-capitalist fantasy that the environmental crisis can be resolved within existing social, political, economic and cultural structures.⁶⁸ These structures, however, rest upon potent cocktails of power and knowledge. On the one hand, they result in an epistemology characterized by overweening faith in science, reason, technological fetishism and ‘progress’ – and on the other, in an ontology of otherness in which social relations are predicated upon humanity’s dominance over nature. Nature, meanwhile, is viewed instrumentally – as a resource, service or form of capital that must be appropriated and commoditized.⁶⁹ Such commitments are exemplars of hierarchical, totalizing and dichotomous (culture/nature and scientific knowledge/traditional knowledge) metonymic reasoning in a monoculture of knowledge.⁷⁰ Nature is the savage and other locus of exteriority and ‘since what is exterior does not belong and what does not belong is not recognized as equal, the locus of exteriority is a locus of inferiority as well’.⁷¹ The externalization, commodification and domination of nature are therefore foundational to the ‘capitalistic civilizational model’.

Sustainable development and the green economy are also legible as forms of neo-colonialism that epitomize the epistemological crisis of modernity, in which local, indigenous and traditional knowledges are valid only to the extent that they serve global capitalism. Sustainable development and the green economy are re-embodiments of the epistemological violence of colonialism that silenced native knowledges and imposed ‘true’, civilized knowledge through the transformation of nature into an unconditionally available and infinitely exploitable natural resource.⁷²

68. Weaker versions of sustainable development adopt an anthropocentric view of the relationship between humanity and nature ‘composed of three strands: the perception that people are separate from nature; the idea that nature is a “resource” to be used for the benefit of society or individuals; and the view that we have the right to dominate nature’: CC Williams and AC Millington, ‘Environment and Development in the UK’ (2004) 170(2) *The Geographical Journal* 99–104 at 100. From the large number of critiques of sustainable development, see T Doyle, ‘Sustainable Development and Agenda 21: The Secular Bible of Global Free Markets and Pluralist Democracy’ (1998) 19(8) *Third World Quarterly* 771–86; SB Bannerjee, ‘Who Sustains Whose Development? Sustainable Development and the Reinvention of Nature’ (2003) 24(1) *Organization Studies* 143–50 and Sachs (n 27).

69. See TW Luke, ‘Sustainable Development as a Power/Knowledge System: the Problem of Governmentality’ in F Fischer and M Black (eds), *Greening Environmental Policy: The Politics of a Sustainable Future* (Palgrave MacMillan, London 1995) for a Foucauldian analysis of sustainability as a green form of governmentality.

70. B de Sousa Santos, ‘A Critique of Lazy Reason: Against the Waste of Experience’ in I Wallerstein (ed.), *The Modern World System in the Longue Durée* (Paradigm Publishers, Boulder 2004).

71. B de Sousa Santos, J Nunes and MP Meneses, ‘Opening Up the Canon of Knowledge and Recognition of Difference’ in BS Santos (ed.), *Another Knowledge is Possible* (Verso, London 2007) at xxii.

72. *Ibid.*, at xxxvi. In Kothari’s words, ‘where colonialism left off, development took over’: R Kothari, *Rethinking Development: In Search of Humane Alternatives* (Ajanta, Delhi 1998) at 143. From the vast literature on biopiracy and the use of intellectual property rights to gain ownership over the use of nature and its knowledge see G Martin and S Vermeulen, ‘Intellectual Property, Indigenous Knowledge, and Biodiversity’ (2005) 16(3) *Capitalism Nature Socialism* 27–48 and M Sunder, ‘The Invention of Traditional Knowledge’ (2007) 70(2) *Law and Contemporary Problems* 97–124.

The commodification of nature creates the risk that money becomes the sole measure of value and that human beings condemn themselves to a relationship *against* nature in perpetuity. Indeed,

Nature, turned into a resource, has no logic but that of being exploited to its exhaustion. Once nature is separated from human beings and from society, there is no way of conceiving of how they feed back into each other. The concealment prevents the formation of balances and of limits, and that is why ecology can assert itself only through ecological crises.⁷³

The current ecological crisis exposes the contradictions of the materialist, techno-scientific onto-epistemology that produced it. For Walter D. Mignolo, the crisis may be viewed as an outgrowth of coloniality – the mindset that has characterized Western engagement with the rest of the world. Mignolo contends that '[m]odernity and tradition are *both Western and modern concepts* by means of which "West" and "modernity" became the very definition of the enunciation that invented "tradition" and the "Orient."⁷⁴ Coloniality wrapped up 'nature' and 'natural resources' in a complex system of Western cosmology, structured theologically and secularly; it also manufactured an epistemological system that legitimized its uses of 'nature' to generate massive quantities of 'produce', first, and massive quantities of 'natural resources' after the Industrial Revolution.⁷⁵

Based on tropes of progress and modernity, colonial thinking transformed nature from a living system into a fixed and inert 'object external to human life, to be overcome by action, and as the prime resource for the needs created by the Industrial Revolution'.⁷⁶ In contrast, decolonial thinking is transformative, transgressive and capable of 'overcoming the limitation of territorial thinking (e.g. the monotopic epistemology of modernity)'.⁷⁷ In the absence of rapid decarbonization or technological innovations that offer ways of resolving the tension between the imperative of economic growth and environmental protection, contemporary models of development are now perhaps irredeemably counterproductive. The notion of development as a negative, external imposition of economic orthodoxies is not new, but Mignolo argues that we have reached a point at which ideology of developmentalism is environmentally dangerous.⁷⁸ It

is no longer an option for freedom, but a global design that disrupts harmony, pollutes, transforms natural regeneration into artificial regeneration through the use of herbicides and genetically modified seeds, and, as a consequence, prevents 'living in harmony and fullness'.⁷⁹

73. Santos *et al.* (n 71) at xxxvi.

74. W Mignolo, *The Darker Side of Western Modernity: Global Futures, Decolonial Options* (Duke University Press, Durham, NC and London 2011) at 78; emphasis in original. See A Quijano, 'Coloniality of Power, Eurocentrism, and Latin America' (2000) 1(3) *Nepantla: Views from South* 533–80 on race and global capitalism as constituents of coloniality.

75. Mignolo (n 74) at 13. Santos *et al.* (n 71) at xlix argue that '[c]olonialism has come to an end as a political relationship, but not as a social relationship, persisting in the shape of the coloniality of power'.

76. Mignolo (n 74) at 174.

77. W Mignolo, *Local Histories/Global Designs: Coloniality, Subaltern Knowledges and Border Thinking* (Princeton University Press, Princeton NJ 2000) at 67.

78. See for example A Escobar, *Encountering Development: The Making and Unmaking of the Third World* (Princeton University Press, Princeton NJ 1995).

79. Mignolo (n 74) at 310.

Traditional knowledges offer a way out of the false hope of ‘fixity and certitude, derived from the promises and premises of modern science’.⁸⁰ There are many different ways of re-imagining, but the indigenous and traditional knowledges of the Andean peoples stand out for their contribution to the emergence of a counter-hegemonic jurisprudence of climate justice. It is to a consideration of this subject that we now turn.

5 COUNTER-HEGEMONIC KNOWLEDGES: EPISTEMOLOGIES OF THE GLOBAL SOUTH

5.1 The ‘ecology of knowledges’

Climate justice requires openness to other ways of seeing, hearing and knowing. It requires engagement in what Santos calls the ‘ecology of knowledges’ between hegemonic Western discourses and the epistemologies of the South on a basis of mutual respect.⁸¹ For Mignolo, the development of counter-hegemonic epistemologies requires decolonial or ‘border thinking’ that ‘structures itself on a double consciousness, a double critique operating on the imaginary of the modern/colonial world system, of modernity/coloniality’.⁸² Decoloniality calls into question not only the mindset and practices of colonialism but those of Western modernity as a whole:

The last horizon of border thinking is not only working towards a critique of colonial categories; it is also working toward redressing the subalternization of knowledges and the coloniality of power ... to an other tongue, an other thinking, an other logic superseding the long history of the modern/colonial world, the coloniality of power, the subalternization of knowledge and the colonial difference.⁸³

Border thinking involves recovering epistemologies marginalized by the dominance of Western technoscientific thinking, not least in order to overcome the Euro-American worldview characterized by the rift between nature and culture. Gonzales and Gonzalez argue that this worldview

views nature as inert, whether animate or inanimate, as malleable for profit and as an endless source of resources. It relies heavily on reductionist science by detaching the material world from the non-material world. It views the past as primitive, traditional and backward. The concept of sustainability is not part of the thread of such a worldview ... Its key characteristics are in stark contrast with those of the Andean worldview of ever.⁸⁴

80. JB White, ‘Introduction: Is Cultural Criticism Possible?’ (1986) 84 Michigan Law Review 1373–88 at 1379.

81. The ecology of knowledges does not conceive of indigenous knowledge as an alternative to hegemonic knowledge because this would presuppose an illegitimate standard against which other epistemologies are measured.

82. Mignolo (n 77) at 87. Border thinking aims to displace Eurocentric epistemology and hermeneutics. It is transgressive and insurgent and Mignolo describes it as mobile, enactive and performative (ibid., at 26).

83. Mignolo (n 77) at 338.

84. T Gonzales and M Gonzalez, ‘From Colonial Encounter to Decolonizing Encounters. Culture and Nature Seen from the Andean Cosmivision of Ever: the Nurturance of Life as Whole’ in S Pilgrim and J Pretty (eds), *Nature and Culture: Rebuilding Lost Connections* (Earthscan, London 2010) at 87.

In contrast to the monolithic production of 'knowledge', counter-hegemonic knowledges emerge in a variety of ways. They stand, moreover, in varying relations to the existing creed. Some are firmly rooted in the tradition that they seek to overturn (such as is the strategy of ecosocialism), some emerge in confrontation with hegemonic ideologies (as indigenous and traditional knowledges tend to), while others straddle the divide to a greater or lesser extent (ecofeminism is a good example of this).

5.2 Counter-hegemonic knowledges and strategies

Ecosocialism seeks to address the shortcomings of Marxist theory on environmental issues arising from the fact that Marx did not adequately consider the probability that capitalism's logic of ceaseless and limitless expansion would destroy the conditions necessary for its own reproduction. As Löwy argues, an 'ecology that does not recognize the relation between "productivism" and the logic of profit is destined to fail – or, worse, to become absorbed by the system'.⁸⁵ Characterized by its faith in scientific materialism and the dialectics of progress, Marxism is a quintessential example of Enlightenment rationality that treads a precarious line between class and ecology. Ecosocialism has likewise been criticized for failing to treat seriously the exploitation of humanity and nature on equal terms.⁸⁶ In their *Ecosocialist Manifesto*, Kovel and Löwy develop a critique of neoliberal globalization as imperialism. They attribute the causes of the ecological crisis to rampant industrialization 'that overwhelms the earth's capacity to buffer and contain ecological destabilization', pollution and resource depletion, consumerism, the subordination of nature to the imperative of accumulation, and the reduction of 'the majority of the world's people to a mere reservoir of labor power'.⁸⁷

Ecofeminism also provides an insurgent critique of the Eurocentric tradition in which it originates. For example, Mies and Shiva deconstruct the assumption that modern science is neutral, objective and value free.⁸⁸ They argue that it is the mechanical, reductionist and patriarchal product of Enlightenment rationality facilitating the degradation of nature and the oppression of women. They regard scientific epistemology as colonial, violent and fundamental to capitalist growth:⁸⁹

[M]odern civilisation is based on a cosmology and anthropology that structurally dichotomizes reality, and hierarchically opposes the two parts to each other: the one always considered superior, always thriving and progressing at the expense of the other. Thus, nature is subordinated to man; woman to man, consumption to production and the local to the global, and so on.⁹⁰

85. M Löwy, 'What is Ecosocialism?' (2005) 16(2) *Capitalism Nature Socialism* 17.

86. See J Kovel, *The Enemy of Nature: the End of Capitalism or the End of the World?* (Zed Books, London and New York 2002). It is increasingly difficult to distinguish between specific environmental injustices (Bhopal, Ogoniland, the destruction of the Yasuni national park or large dam projects like Narmada or Belo Monte) and climate injustice.

87. J Kovel and M Löwy, *An Ecosocialist Manifesto*, September 2001, <http://www.iefd.org/manifestos/ecosocialist_manifesto.php> accessed 1 August 2012.

88. M Mies and V Shiva, *Ecofeminism* (Zed Books, London 1993).

89. For a critique of the contradictions in their approach to science see M Molyneux and DL Steinberg, 'Mies and Shiva's "Ecofeminism": A New Testament?' (1995) 49 *Feminist Review* 86–107.

90. Mies and Shiva (n 88) at 5.

The critique offered by Mies and Shiva amplifies the insights of ecosocialism to develop a deeper understanding of the links between domination, hierarchy, violence, environmental degradation and gender oppression and demonstrates the potential of engagement in the ecology of knowledges.⁹¹ Ecofeminist theory powerfully challenges notions that women and nature are inferior to men, and highlights the links between impoverishment, environmental destruction and global warming. It offers a different way of knowing and being-with (as Plumwood variously describes them) Earth Others, the supra-human, the non-human and the more-than-human.⁹² Plumwood seeks to develop an epistemology designed precisely to overcome the instrumentalist separation of humanity from nature,⁹³ and ecofeminism (relatedly) makes it abundantly clear that gender justice and climate justice are inextricably linked. Morrow, for example, argues that feminist theory promotes active citizenship and participatory politics, suggesting that ‘an inclusive and consensual mode of knowledge gathering and decision-making offer[s] the opportunity to place the shared priorities and collective concerns generated by the demands of sustainability much more prominently within the frame for consideration than is presently the case’.⁹⁴

In recent years a range of innovative legal strategies that supplement and augment the insights of ecosocialism and ecofeminism (while arguably standing in a less ambiguous relation to hegemonic epistemology) have been developed in the global South that directly challenge hegemonic neoliberal thinking on ecology and nature. In 2005, the Inuit Circumpolar Conference launched a path-breaking petition against the Bush administration in the Inter-American Commission of Human Rights (IACHR).⁹⁵ The petition argued that climate change is destroying Inuit culture and traditional knowledge and threatening a range of human rights including health, the right to property and even the right to life. The petition was rejected by the IACHR on the basis that the information provided by the claimants was insufficient to enable the Commission to determine whether the alleged facts constituted a violation of the rights in the American Declaration of the Rights and Duties of Man.⁹⁶

91. On ecofeminism, indigenous knowledge and biotechnology see Mies and Shiva (n 88).

92. V Plumwood, *Environmental Culture: The Ecological Crisis of Reason* (Routledge, Abingdon 2002).

93. V Plumwood, ‘Nature, Self, and Gender: Feminism, Environmental Philosophy, and the Critique of Rationalism’ (1991) 6(1) *Hypatia* 3–27. Salleh uses critical theory to develop an epistemological critique of the culture–nature dichotomy and the relationship between the domination of women and the domination of nature: A Salleh, ‘Epistemology and the Metaphors of Production: An Ecofeminist Reading of Critical Theory’ (1988) 5(2) *Studies in the Humanities* 130–39.

94. K Morrow, ‘Environmental Law and Sustainability Law’ in A Philippopoulos-Mihalopoulos (ed.), *Law and Ecology: New Environmental Foundations* (Glasshouse/Routledge, Abingdon 2010) at 145.

95. S Watt-Cloutier, ‘Petition to the Inter American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States’, 7 December 2005 <http://www.ciel.org/Publications/ICC_Petition_7Dec05.pdf> accessed 1 August 2012.

96. See ME Middaugh, ‘Linking Global Warming to Inuit Human Rights’ (2006) 8 *San Diego International Law Journal* 179 and SC Aminzadeh, ‘A Moral Imperative: The Human Rights Implications of Climate Change’ (2007) 30 *Hastings International and Comparative Law Review* 231. The failure of the petition illustrates the difficulty of establishing causation in climate change cases: see L Butti, ‘The Tortuous Road to Liability: A Critical Survey on Climate Change Litigation in Europe and North America’ (2011) 11(2) *Sustainable Development Law and Policy* 32–6.

Nonetheless, the petition constituted an innovative attempt to link human rights law, traditional knowledge and climate justice. It used interviews with Inuit hunters and elders to articulate a legal basis for making carbon emissions a justiciable violation of human rights.⁹⁷

In a similar vein, it was Andean culture and epistemology that underpinned Bolivia's submission to Rio+20, rejecting mainstream conceptions of sustainable development and green economy in a clear attempt to construct a counter-hegemonic conception of climate justice based on the People's Agreement concluded in Cochabamba, Bolivia in April 2010.⁹⁸ Reflecting a more harmonious conception of humanity's role in nature, the submission explicitly rejected the viability of the green economy as a market instrument for managing the 'economic invisibility of nature'. The Agreement itself seeks to forge a dialogue with neoliberal and technoscientific epistemologies in the hope of achieving sustainability and climate justice. It provides a distinctive perspective that differs from dominant orthodoxies but that is nonetheless readily comprehensible from a Western mind-set. Its call for the repayment of ecological debt may be viewed as being a form of reparative justice. The demand that developed countries should provide the resources for adaptation and mitigation can be characterized as being a form of distributive justice. Furthermore, its call for the establishment of an international environment tribunal to sanction developed countries that fail to comply with binding obligations under the Kyoto Protocol constitutes a form of procedural justice.⁹⁹

However, the most profound counter-hegemonic aspect of the Agreement flows from the possibilities of re-embodiment represented by the figure of *Pachamama* or Mother Earth, a goddess of fertility in Aymara and Quechua mythology and the source of life in Andean cultures.¹⁰⁰ *Pachamama* is the foundation of an onto-epistemology in which being and knowing are inseparable. Climate science is treated as a non-privileged form of knowledge that simply confirms the awareness of Andean peoples of the unfolding disaster of climate change.¹⁰¹ Berkes argues that although

97. Inuit traditional knowledge is derived from observation and lived experience. It is a 'highly pragmatic and comprehensive system of knowledge of the land, animals, weather patterns, winds, and changes in these elements ... [and] includes knowledge of how to conduct oneself personally and how to relate to others. Traditionally, Inuit knowledge was transmitted via an oral tradition, and there was no divide between physical and metaphysical aspects of the world': K Koutouki and N Lyons, 'Canadian Inuit Speak to Climate Change: Inuit Perceptions on the Adaptability of Land Claims Agreements to Accommodate Environmental Change' (2009–10) 27(3) *Wisconsin International Law Journal* 1–22. In *Delgamuukw*, the Canadian Supreme Court sought to bridge the gulf of incomprehension between Western and traditional knowledges by accepting that knowledge and culture are commonly transmitted through oral histories in Aboriginal societies. Notwithstanding 'the challenges created by the use of oral histories as proof of historical facts, the laws of evidence must be adapted in order that this type of evidence can be accommodated and placed on an equal footing with the types of historical evidence that courts are familiar with, which largely consists of historical documents': *Delgamuukw v The Queen*, [1997] 3 S.C.R. 1010, 1091 (Can.) at 1069.

98. World People's Conference on Climate Change and the Rights of Mother Earth, 22 April 2010, Cochabamba, Bolivia.

99. See below.

100. It is worth noting that anthropocentrism is not to be replaced by ecocentrism or biocentrism in the ecology of knowledges because doing so would replicate the dichotomous rationality characteristic of the epistemological crisis.

101. See for example D Ruiz, HA Moreno, ME Gutierrez and PA Zapata, 'Changing Climate and Endangered High Mountain Ecosystems in Colombia' (2008) 398 *Science of the Total Environment* 122–32.

science and indigenous knowledges place differing emphases on content and process,¹⁰² in principle it is possible to combine them in the co-production of knowledge so long as the integrity of each is respected. He argues that '[t]he world must recover and re-learn ancestral principles and approaches from native peoples to stop the destruction of the planet, as well as promote ancestral practices, knowledge and spirituality to recuperate the capacity for "living well" in harmony with Mother Earth.'¹⁰³

Emphasizing the counter-hegemonic mode of this alternative epistemic approach, Gonzales and Gonzalez directly see sustainable development and indigenous sustainability as juxtaposed, arguing that hegemonic sustainable development is a 'space-based, non-sustainable culture of the mind, land and spirit ... [an] erosive colonial process [that] has challenged sustainability rooted in indigenous places'.¹⁰⁴ Resistively however,

while the non-sustainable monocultures purveyed by dominant cultures continue to expand across South America, Andean *ayllu* (cultural places) continue to be nurtured through the spiritual values of indigenous communities.¹⁰⁵

It should be emphasized that the Andean way of knowing is not dominated by rationality, detached from emotion or based on dichotomous separations of subject and object and/or culture and nature. 'Whereas the ontology of Western thought would halve the world between being and beings, the Andean world order renders the world as a whole. All this is manifest in the vitality of all beings, one distinct from the other, yet in integrative union where all are alive and equally important for life to be regenerated.'¹⁰⁶

In line with this worldview, the Agreement views global warming as an ecological and economic crisis on the one hand, and as the epistemological crisis of a patriarchal model of civilization 'based on the submission and destruction of human beings and nature' on the other. It calls for a new system based, amongst other things, on the principles of harmony and balance among all and with all things; complementarity; solidarity; equality; collective well-being and the satisfaction of the basic necessities of all. It calls for the elimination of all forms of colonialism, imperialism and interventionism. The Agreement explicitly condemns capitalism for imposing 'a logic of competition, progress and limitless growth' in a regime of production and consumption that seeks profit without limits, separates human beings from nature and imposes a logic of domination and the commodification of everything: 'water, earth, the human genome, ancestral cultures, biodiversity, justice, ethics, the rights of peoples, and life itself'.

102. F Berkes, 'Indigenous Ways of Knowing and the Study of Environmental Change' (2009) 39(4) *Journal of the Royal Society of New Zealand* 151–6.

103. Peoples Agreement (n 98 above). Living well is *Sumak Kawsay* in Quechua, *Suma Qamaña* in Aymara, *Ñande Reko* (Harmonious life) in Guarani. The concept is included in the Principles, Values and Aims of the State in the 2009 Constitution of the Plurinational State of Bolivia.

104. Gonzales and Gonzalez (n 84) at 84: '*Ayllu* is a Quechua and Aymara word that implies all living beings are harboured in a place where the natural collectivity of visible and non-visible beings (people, llamas, rocks, rivers, mountains and so on) is nurtured by *pachamama* (Earth mother). [It] is the regional land based order around which indigenous communities base their ethnic organization and, according to Andean cosmovision, *ayllu* is the seed of all life'.

105. *Ibid.*

106. *Ibid.*, at 89.

Despite its resistive, energizing onto-epistemological foundations and content, the Agreement is not problem-free. It illustrates the difficulties and contradictions of the politics of re-imagination and translation – particularly those involved in engaging with hegemonic knowledges – without succumbing to them. Four issues of increasing complexity are worth noting in this regard. First, the Agreement relies on the climate science consensus in asserting the necessity of preventing global temperatures from increasing by more than 2 degrees Celsius. This is unproblematic so long as science does not define or confine the epistemological parameters of climate justice and can be seen as an example of how different knowledges can flourish alongside each other in the ecology of knowledges.¹⁰⁷

Secondly, the Agreement calls for the establishment of an International Climate and Environmental Justice Tribunal to promote procedural justice by ensuring that developed countries meet their emissions obligations and discharge their ecological debts. While this too is not intrinsically problematic, there is a latent tension between formal legal rationality and regulatory institutions on the one hand, and democratic and pluralistic forms of legality based on emancipatory forms of knowledge on the other.¹⁰⁸

Thirdly, although the jurisprudence of *Pachamama* aims to transcend the anthropocentric nature of the UN Framework Convention on Climate Change and other mainstream approaches to climate justice, it also highlights the problems of human rights approaches to climate change that I have addressed elsewhere.¹⁰⁹ This is problematic because nature only requires rights in economic systems that destroy it.¹¹⁰ Within rights discourse itself, it is difficult to reconcile hard won sub-altern rights like sovereign control over natural resources or the rights of indigenous

107. 'Under the ecology of knowledges, granting credibility to non-scientific knowledge does not imply discrediting scientific knowledge. What it does imply is using it in a counter-hegemonic way. This consists, on the one hand, in exploring alternative scientific practices made visible through plural epistemologies of scientific practices and, on the other, in promoting interdependence between scientific and non-scientific knowledges': B de Sousa Santos, 'Public Sphere and Epistemologies of the South' (2012) XXXVII(1) *Africa Development* 43–67, 57.

108. Santos *et al.* (n 71) at li. The two most well-known cases are the *Delegamuukw* case, referred to above, and the *Mabo* cases on indigenous land rights in Australia: *Mabo and Another v The State of Queensland and Another* [1988] HCA 69; (1989) 166 CLR 186 F.C. 88/062 and *Mabo and Others v Queensland* (No. 2) [1992] HCA 23; (1992) 175 CLR 1 F.C. 92/014.

109. S Adelman, 'Rethinking Human Rights: the Impact of Climate Change on the Dominant Discourse' in S Humphreys (ed), *Climate Change and Human Rights* (Cambridge University Press, Cambridge 2010). The Agreement pursues a rights-based approach and calls for a Universal Declaration on the Rights of Mother Earth that includes the right to be respected; to regenerate its bio-capacity and to continue its vital cycles and processes free of human alteration; the right to maintain their identity and integrity as differentiated beings, self-regulated and interrelated; and to prompt and full restoration for violations to the rights acknowledged in this Declaration caused by human activities. It demonstrates the potential to move beyond the *universalizing* tendency of liberal conceptions of human rights towards the possibilities of negotiated *universalizability* in the ecology of knowledges.

110. The paradox of rights is that they appear redundant when the protections they refer to are enforced. Conversely, their absence highlights the need for them. See H Arendt, *The Origins of Totalitarianism* (Meridian, New York 1951) and J Rancière, 'Who is the Subject of the Rights of Man?' (2004) 2/3 (Spring/Summer) *The South Atlantic Quarterly* 103.

peoples with the imperative of treating rainforests, the lungs of the planet, as global commons.¹¹¹

This points to the fourth and most problematic tension in the Agreement, which arises from sovereignty as the (often mutually contradictory) basis for the self-determination of peoples, nations and states. Sovereignty is simultaneously the basis for a binding international regime on climate change and the biggest impediment to achieving a successor to the Kyoto Protocol. This raises broader questions about the possibility of climate justice in an international juridico-political order that remains overwhelmingly sovereign-centric and the nature and politics of cosmopolitan alternatives.¹¹² It is unclear whether Westphalian sovereignty is viewed as a universalization of European particularity and hence as an archetypical hegemonic discourse or, in Santos's formulation, as a globalized localism capable of being re-imagined and re-appropriated, as democracy and human rights have been.¹¹³ Despite these problems, the Agreement symbolizes the emergence of a counter-hegemonic, subaltern jurisprudence that seeks to engage with the hegemonic discourses of the West.

The radicalism of the South American legal strategies is worth underlining. In 2008, Ecuador became the first country in the world to constitutionalize the rights of nature. These are laid out in Chapter Seven of the amended constitution, which states (Art. 71) that 'nature, or *Pachamama*, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes'. Nature has the right to be restored (Art. 72) and '[p]ersons, communities, peoples, and nations shall have the right to benefit from the environment and the natural wealth enabling them to enjoy the good way of living' (Art. 74).¹¹⁴ The constitutionalization of the rights of nature has resulted in two landmark cases.

In March 2011, the Provincial Court (Sala de la Corte Provincial) in Loja ruled in favour of Nature in respect of the Vilcabamba river – the first successful enforcement of the Rights of Nature in the 2008 Constitution. The court held the provincial government liable for flood damage caused by the dumping of construction debris.¹¹⁵

111. See Ostrom on governance of the commons: E Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, Cambridge 1990).

112. S Adelman, 'Cosmopolitan Sovereignty' in C Bailliet and K Franko Aas (eds), *Cosmopolitan Justice and its Discontents* (Routledge, Abingdon 2011).

113. A local phenomenon that is successfully globalized. Santos (n 64) at 179. See Baxi on the emergence of human rights from suffering and rightlessness, their appropriation, re-appropriation and ownership by the West and the peoples of the global South, and the sterility of the anachronistic universality–relativism debate. He argues that human rights are subject to continuous contestation: U Baxi, *The Future of Human Rights* (2nd Ed) (Oxford University Press, Delhi 2006) and U Baxi, *Human Rights in a Posthuman World: Critical Essays* (Oxford University Press, Delhi 2007).

114. See ME Whittmore, 'The Problem of Enforcing Nature's Rights Under Ecuador's Constitution: Why the 2008 Environmental Amendments Have No Bite' (2011) 20(3) *Pacific Rim Law and Policy Journal* 659–91.

115. *Wheeler v Director de la Procuraduría General Del Estado de Loja*, Juicio No. 11121-2011-0010 <<http://www.pachamama.org/news/first-successful-case-enforcing-rights-of-nature-in-ecuador>> accessed 18 September 2012. The case concerned the excessive dumping of large quantities of rock and excavation material in the Vilcabamba River from a road-widening project. See E Daly, 'The Ecuadorian Exemplar: The First Ever Vindications of Constitutional Rights of Nature' (2012) 21(1) *Review of European Community and International Environmental Law (RECIEL)* 63–6, who questions the likelihood that the decision will be enforced – on

The court stated that in cases where rights of nature conflicted with other constitutional rights (which was not the case in this matter), the rights of nature would prevail because a 'healthy' environment is more important than any other right and affects more people.¹¹⁶ In a subsequent case, another provincial court upheld the Ecuadorian government's assertion of the rights of nature against illegal mining activities.¹¹⁷

In December 2010, the Bolivian Legislative Assembly passed the Law of the Rights of Mother Earth,¹¹⁸ which is treated as a dynamic, living system of interconnected and interdependent communities who share a common destiny.¹¹⁹ The Bolivian law, codified on Earth Day (22 April 2011), enshrines seven justiciable rights of Mother Earth and her constituent life systems, including human beings: to life, biodiversity, water, clean air, equilibrium, restoration and freedom from contamination. The law contrasts sharply with a constitution that has facilitated environmental destruction, and requires the conformity of all legislation to *Pachamama* and, importantly, combines institutional safeguards for nature and environmental human rights with the aim of reconciling the rights of Mother Earth with those of the poor. Time will reveal the relative impact of the law and the constitution and whether the law has more than rhetorical force.¹²⁰

These rare cases provide glimmers of that hope that a jurisprudence commensurate with the scale and urgency of the environmental crisis is emerging, albeit slowly and unevenly. They indicate an appreciation of the need to reconceptualize the relationship between humanity and nature and to forge a new epistemology that facilitates struggles for climate justice.

which, see 'Vilcabamba River Case Law: 1 Year After' at <<http://therightsofnature.org/rights-of-nature-laws/vilcabamba-river-1-year-after/>> accessed 30 September 2012. In September 2012, the Whanganui River in New Zealand was granted legal status. The government and the local *iwi* (Maori tribal group) are made guardians of the river with duties to protect it under an agreement between them although the principles and values under which this will be carried out are still to be negotiated. Under the agreement the river is given legal status under the name Te Awa Tupua. Two guardians, one from the Crown and one from a Whanganui River *iwi*, will be given the role of protecting the river. K Shuttleworth, 'Agreement Entitles Whanganui River to Legal Identity', *The New Zealand Herald* 30 August 2012 <http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10830586> accessed 30 September 2012.

116. Daly, *ibid.*, 64.

117. *República del Ecuador Asamblea Nacional, Comisión de la Biodiversidad y Recursos Naturales*, Acta de Sesión No. 66 (15 June 2011) ('*República del Ecuador Asamblea Nacional*') <<http://asambleanacional.gov.ec/blogs/comision6/files/2011/07/acta-66.pdf>> accessed 1 October 2012. See Daly (n 115).

118. Law 071 of the Plurinational State of Bolivia. This followed the proclamation of International Mother Earth Day by the UN General Assembly on 1 May 2009 (UN General Assembly Resolution 63/278 on International Mother Earth Day (A/RES/63/278)). The resolution was proposed by Bolivia and adopted by consensus.

119. Paragraph 39 of the Rio+20 text recognizes 'that planet Earth and its ecosystems are our home' before dismissively noting 'that "*Mother Earth*" is a common expression in a number of countries and regions, and we note that some countries recognize the rights of nature in the context of the promotion of sustainable development' (my emphasis).

120. It is a declaratory 'short law' containing a statement of principles of uncertain legal force <<http://woborders.wordpress.com/2012/08/24/new-mother-earth-law-sidelines-indigenous/>> accessed 20 September 2012. See J Tockman, 'Citizenship Regimes and Post-Neoliberal Environments in Bolivia' in A Latta and H Wittman (eds), *Environment and Citizenship in Latin America: Natures, Subjects and Struggles* (Berghahn Books, Oxford and New York 2012).

6 CONCLUDING REFLECTIONS

The contradictions in the People's Agreement demonstrate the difficulties involved in constructing an-other, democratic epistemology based on harmony, balance, complementarity and equity. Despite the challenges, it is clear that climate justice is not possible without a vibrant ecology of knowledges which does not seek to discredit science *in toto* but which resists its deployment as a totalizing universal form of knowledge.¹²¹ The Agreement aims to replace the either-or thinking characteristic of Western modernity with the both-and epistemologies of the global South without lapsing into a sterile relativism. *Pachamama*, the science of the Intergovernmental Panel on Climate Change, and the ways of knowing of the Inuit and Aymara are all equally true, valid, provisional and incomplete. They can coexist, supplement and validate each other in an ecology of knowledges that humbly accepts the limits of both nature and knowledge, and celebrates difference, diversity and equality.

Santos *et al.* argue that there is no ignorance or knowledge 'in general' and therefore, there are no complete knowledges. Because knowledges operate in constellations, global social justice is just not possible without global cognitive justice, which itself is possible only by 'substituting a monoculture of scientific knowledge by an ecology of knowledges'¹²² – a transition that bridges the gap between knowledge as regulation and emancipation.¹²³

Like knowledge, justice is also never complete, total or settled. In the ecology of knowledges, justice is provisional because it is always under negotiation, but this does not mean that justice is empty. Ironically, the Kyoto Protocol reflects a limited consensus on distributive and reparative justice: developed countries have obligations to reduce their emissions and to transfer resources for adaptation and mitigation to developing countries – a combination of restorative and distributive justice. These are necessary but limited forms of justice because it is often difficult to identify the victims and find out who bears responsibility in order to restore or adequately compensate them.¹²⁴ In cases of irreversible environmental destruction, the damage is in any case impossible to repair. Fundamentally, however, the provisions of the Protocol and its forms of limited justice are inadequate because they fail to address the hegemonic ideologies and global structural inequalities that reproduce impoverishment and underdevelopment. The provisions therefore render any meaningful conception of global justice impossible.

Climate justice is impossible without confronting the unpalatable fact that there is no alternative to reducing carbon emissions and the inescapable truth that this is not possible under neoliberalism or any other form of capitalism. It is possible to imagine a future in which technology produces cleaner forms of industrialization, but not one in which capitalism is just. Climate justice requires new forms of production and consumption, the righting of historical wrongs and the elimination of contemporary injustices.

121. B de Sousa Santos, 'Beyond Abyssal Thinking: From Global Lines to Ecologies of Knowledges' <<http://www.eurozine.com/pdf/2007-06-29-santos-en.pdf>> accessed 20 September 2012.

122. Santos *et al.* (n 71) at xlvi.

123. *Ibid.*, at li. In *Toward a New Legal Common Sense*, Santos argues that modernity is characterized by the tension between two pillars: regulation, which is exemplified by science and law and tends to overwhelm the second pillar, that of emancipation (Santos, n 64).

124. J Thompson, 'Historical Obligations' (2000) 78(3) *Australasian Journal of Philosophy* 334–45.

As I have argued, this is not possible without cognitive justice. The onto-epistemologies of the South offer hope of the possibility of less destructive ways of being and knowing, and of reconfiguring the relationship between humanity and nature, although it is too soon to decide whether they will succeed in preventing environmental destruction and promoting climate justice. If the sovereign nation-state is the quintessential imagined community of the West, Western minds are presumably capable of *re-imagining* other, more democratic communities in a different post-Westphalian juridico-political order.¹²⁵ Like traditional and indigenous knowledges, subaltern justice, jurisprudence and legality are constructed locally – from the bottom up.¹²⁶ Produced in suffering and rightlessness, they suggest ways of being and knowing that offer possibilities of re-imagining and re-embodiment what it means to live well, ways of recuperating the wasted knowledge rejected by the lazy reason of the West, and forms of struggle that make states and corporations accountable for climate injustice.¹²⁷ Such a vision holds out hope of closing the abyss that Western epistemology has created in order to exclude, marginalize and silence other knowledges.

Trapped in anthropocentric instrumentalism, possessive individualism and market fundamentalism, Western onto-epistemology seems unwilling or unable to comprehend the enormity of civilizational change required by the scale, dimensions and urgency of global warming. It is difficult to live well or achieve justice in a monoculture that knows the price of everything and the value of nothing. There are no ready-made answers, but the struggles of the indigenous peoples of Latin America, the Arctic and elsewhere at least indicate the possibility of progressive alternatives.

We can but hope that future historians will have an environment in which to contemplate why we fiddled while the planet burned. Unless we are too stupid to survive, perhaps such future historians will ascribe our failure to achieve climate justice to the hubristic, selfish failure of the imaginary that pitted us against each other, ourselves and nature. Little has changed in the 13 years since Sachs warned that justice is incompatible with the unfettered pursuit of faster and more economic development and argued that

the demand for justice and dignity on behalf of Southern countries threatens to accelerate the rush towards biospherical disruption, as long as the idea of justice is firmly linked to the idea of development. Delinking the aspiration for justice from the pursuit of conventional development therefore becomes vital, both for rescuing the ideal of justice as ‘development’

125. B Anderson, *Imagined Communities* (2nd Ed) (Verso, London 1991). On international law as colonialism, see A Anghie, *Imperialism, Sovereignty and the Making of International Law* (Cambridge University Press, Cambridge 2004) and as coloniality, see W Mignolo, ‘Cosmopolitanism and the De-colonial Option’ (2010) 29 *Studies in Philosophy and Education* 11–27.

126. See Santos (n 64) on the relationship between the local and the global. I have chosen to use Santos’ arguments as the prism through which to refract my analysis of climate justice, but his work is part of a broader approach to coloniality, subalterity and non-Western knowledge amongst which the work of E Dussel, ‘Beyond Eurocentrism: The World-System and the Limits of Modernity’ in F Jameson and M Miyoshi (eds), *The Cultures of Globalization* (Duke University Press, Durham NC 1998); Quijano (n 74); and Mignolo (n 74 and n 77) stand out.

127. B de Sousa Santos, ‘A Critique of Lazy Reason: Against the Waste of Experience’ in I Wallerstein (ed.), *The Modern World System in the Longue Durée* (Paradigm Publishers, Boulder 2004).

falters and for inventing paths of social improvement that do not systematically overstep the limits of nature.¹²⁸

Developing countries remain caught on the horns of a dilemma in which breaking free from the historical injustices of underdevelopment through the pursuit of unfettered economic growth will only lead to greater injustices in future.¹²⁹ For the industrialized world at least, justice will have to be about learning how to take less. Rio+20 missed the opportunity to inaugurate a more formal path away from Western onto-epistemology and the hegemony of neoliberalism driving the multiple crises of our age.

128. 'Sufficiency was the hallmark of justice before dreams of infinity took over; sufficiency in resource consumption is now bound to become the axis around which any post-developmental notion of justice will revolve': Sachs (n 27) at 170.

129. *Ibid.*, at 174.



by Upendra Baxi

The following is the text of the Second Rabi Ray Memorial Lecture. Professor Upendra Baxi was to have delivered the lecture but due to his indisposition which prevented him from attending the memorial meeting in New Delhi, it was read out by Professor Manoranjan Mohanty at the meeting on March 6, 2019.

May I begin by warmly thanking Professor (Dr) Manoranjan Mohanty, the Rabi Ray Memorial Committee and Lohia Academy for their kind invitation to deliver this address commemorating the second death anniversary of lamented Shri Rabi Ray? I congratulate Manu Mohanty and his friends for constructing this pedestal of public memory because I believe in one of the few unscripted human rights: the respect for the human rights of those who are not with us. I go a step further in saying that the act of respect for the human rights of the dead is a pre-condition for the respect of the human rights of those living.

Our capacity for such respect provides one precious indicator of a good society. Desecration of their memory is the worst violation of the human rights of the dead and this denial may lead to the massacre of the ancestors and even of the habits, and styles of assassination of memory and history. Rabi Ray, whom I had a fleeting privilege of meeting, was no believer in ancestor-worship but he would have regarded the practice of massacre of ancestors a public vice in a constitutional democracy rather than a badge of freedom of speech and expression.

Rabi Ray had a proper appreciation of the importance of democratic institutions. As Manoranjan Mohanty recalls, he was "a people's leader who never lobbied for power".¹ And, as Prafulla Samantara vividly recalls, Rabi Ray scoffed at the suggestion that would devalue the office of the Speaker (which even for a short while) he adorned with grace and distinction by not even considering the offer of Governor-ship of a State.²

There are many inspiring ways of remembering Rabi Ray: as a Lohian socialist thinker, political leader, Speaker of the Lok Sabha, unflinching advocate of gender equality, a champion of the rights of the landless peasants, a reflexive nationalist, and as an Oriya who was (to use an old Onida TV advertisement by-line) a 'neighbour's envy and owner's pride'. I here recall him by six virtues, which we can do well to imbibe: civility, humility, dignity, discipline, tolerance and love for constitutional freedoms. These virtues are inter-related. These should be democratic virtues of all citizens but instead of being routine these are rare. And to remember Rabi Ray is to engage in a revolutionary but non-violent call for these civic virtues to be widespread. What is more, these virtues animate the very list of fundamental duties of citizens in a small but overwhelmingly important Part IV-A of the Constitution of India.

We learn from Rabi Ray's legendary public life that civility need not be an adversary of competitive liberal democracy; in fact, it is the mark of erudition that respects the dignity of the other, a marker of the state of civilisation. Not in vain did we at Delhi University (and I believe that it is a near-universal formula of Indian Universities) charge every awardee of a degree with the solemn commandment: 'Be thou worthy in conversation and conduct of this degree.'

Love for constitutional freedoms is not an enemy of discipline, as we learnt from the historical decision by Speaker Rabi Ray interpreting the Tenth Schedule of the Constitution disqualifying six members from the Lok Sabha, or the setting up of a committee of enquiry for the removal of Justice Ramwaswamy, a Supreme Court Justice; nor does discipline forbid facilitation of freedom (as displayed in the introduction of a zero hour in the Lok Sabha). Love for constitutional freedoms is not affected (as Basudeb Sahoo puts it in a tribute) by 'fearlessness in a soft heart'.³

His inaugural decision on disqualification of members of the Lok Sabha is accompanied by emphasis on the freedom to dissent. Speaker Rabi Ray characterised 'freedom of dissent as ... an essential ingredient' but it 'should be open and honest'. Further, honest dissent must be 'not even remotely motivated by self-aggrandisement'. Recalling Mahatma Gandhi, Rabi Ray said that an act of honest dissent must 'voice innermost convictions' and not merely 'voice a convenient party cry'. And acts of self-serving dissent where 'greed for political power overtake national interest and the interest of the people' are (if I may add) not expressions of responsible freedom but merely licentious and flirtatious misappropriation of the spirit of constitutionalism.⁴

II

My theme is somewhat unusual but I believe Rabi Ray would have appreciated it. I wish to talk about the future of dissent in the Anthropocene. The Anthropocene signals the narrative of continuing anthropogenic harm manifest in common experience as global warming and climate change but signifies wider changes in the planetary system.⁵ Although the International Stratigraphical Commission has still to endorse the claim that we have exited the age of Holocene (which lasted about 12,000 years) and entered the human age (Anthropocene),⁶ there is sufficient threshold evidence that humankind has entered the era of anthropogenic harm.⁷ Ninetyseven per cent of the world's scientists have agreed on this notion,⁸ though residual disagreement concerns: (a) the mapping, models, and measurement of the change; (b) the dating of the period (advent of agriculture, spread of Industrial Revolution, nuclear weapons proliferation that begun with the explosion at Hiroshima and Nagasaki; (c) the exact numbers of climate displacement refugees; and (d) precise impacts of the methods of geoengineering geared to arrest future anthropogenic harm. There are disagreements as to the measurement, methods, and models predicting levels of harm and effect, not about the reality of anthropogenic harm. In my view, using this dissensus to deny the reality of harm is an extreme form of necrophilic climate change/global warming denialism as well as constitutes the denial of all human rights to a legitimate aspiration for green futures.

The future of the right to public dissent seems bleak in Anthropocene futures for another set of reasons identified as climate change authoritarianism. The term has at least three different meanings. The first refers to how concern with climate change may reinforce the already existing tendencies and patterns of authoritarian leadership, generally known as 'authoritarian environmentalism'; thus, for example, one discusses the Chinese case in terms of authoritarian environmentalism articulated first by Robert Heilbroner who believed that the essential markers were "an absence of inhibitions with respect to the exercise of power" and "limits on the freedom of speech would be needed to control population growth".⁹ Or, one may describe this in terms having two dimensions: a "decrease in individual liberty" that "compels them to obey more sustainable policies" and a process that is dominated by a central state, affording little or no room for social action.¹⁰ Bruce Gilley concludes his China study by observations valid for all cases of authoritarian environmentalism:

Authoritarian environmentalism's merits are its ability to produce a rapid, centralised response to severe environmental threats, and to mobilise state and social actors. However, where state actors are fragmented, the aims of 'ecolites' can easily be undermined at the implementation stage. Moreover, the exclusion of social actors and representatives creates a malign lock-in effect in which low social concern makes authoritarian approaches both more necessary and more difficult.¹¹

It is also possible to view authoritarian environmentalism as an exercise of biopower, as a marker of new insignia for sovereignty, and as a mechanism of surveillance state but we defer analysis for a later date, save saying that howsoever analysed the space for dissent shrinks rapidly and even irrevocably.

The second meaning emerged at last two decades before Donald Trump emerged on the scene as the Denier-in-Chief;¹² deniers take one of the many positions—"those who reject all evidence of global warming; those who believe human activities are not causing global warming; those who accept the reality of global warming but claim that its impacts will be minor, if not beneficial; and those who question the economic and political measures proposed to deal with... Often, deniers hold a mix of these beliefs." President Trump, and his Twitter Archives, are replete with all this and what seems to be added are aspects integral to neoliberalism.

The third approach refers to a 'dilemma'; Richard Falk thus draws our attention to the problem of "short-termism".¹³ It is true that limited terms of constitutional offices are regarded as an essential aspect of limited government and rule of law. It also facilitates a democratic circulation of constitutional and ruling elites and fosters interparty as well as governmental free competition. In other words, short-termism is regarded as democratic and republican virtue.

However, reversal of anthropogenic harm entails rather long-term diagnosis and prescription of bitter medicine. It requires a determined leadership pursuit of several multilevel governmental policy commitments. And longer and stable political leadership is necessary to monitor, and to further develop, international policies concerning mitigation, adaptation, and climate refugees. Justifications for state coercion to alter social life-styles and economic production methods from carbon to post-carbon economies constantly trespass liberal, communitarian, and civic republican principles. But there is assurance that such constitutional or extra-constitutional arrangement will necessarily serve the ends of climate leadership in median or the long run. How much of this coercion menaces the idea and practice of human rights, and particularly the right to dissent?

III

I must conclude perforce by flagging off very briefly and broadly two themes: the fear of freedom and freedom and oppression. Taking the second theme first, most generally the problem is why (under what conditions) the oppressed or the dominated (although there is a difference because not all persons or groups who are dominated may not be oppressed but we let that pass here) consent to their unfreedom.

They may agree to their present conditions of oppression for several reasons of genuinely true or false moral beliefs, They may as individuals entertain a truly held justifiable belief that people similarly situated have limited capacity for altruism and therefore each individual will attempt liberation of self (exit from an oppressive situation) and attempts at coalitions for exit will entail high individual and group costs, The

problem of collective unfreedom (oppression) has been conceptualised in many ways. The problem may be presented by a situation in which while each individual has a free choice, but the resultant situation is that the group or collectivity as a whole does not have the conditions to exercise a free choice. Professor Gerald Cohen illustrated collective unfreedom by a paradigm of closed-door problem, where ten individuals are locked in a room and anyone has the freedom to leave but under a condition that available exits for the remaining nine persons close.¹⁴ The structure of proletarian unfreedom is illustrated this way by contrasting the situation of no exit for the rest of the group but entailing some free choice on the part of an individual member. Martha Nussbaum attempted to explain the problem of unfreedom of women as a group with reference to the notion of 'adaptive preferences', where women as a whole learn to prefer collective unfreedom by adopting preferences which lighten their lived burdens and soften the intensity of their own exploitation as a group.¹⁵ The problem is sought to be solved by appeals to a "state of preventedness" which arises out of a lack of social cooperation by "others who are unwilling to so act" and this 'unwillingness' primarily arises out of social and economic interest.¹⁶ It would seem that we may understand freedom only when we grasp the reasons why oppression is sustained and why the oppressed people fail or are unwilling to pay the costs of forming non-violent coalitions for freedom.

At the moment, freedom of speech and expression does carry with it the power to legislate reasonable restrictions by law made by the Parliament of India The supreme legislative power consists not in abrogation of free speech but its restrictions which are considered 'reasonable' . The ultimate power to adjudge this vests in the Supreme Court of India and, as is well known, the test yields different results in different settings of legisprudence, important for practice the contest over this power is, the power in Parliament is truly vast. The intervention of the Indian judiciary, as we know, is normatively precious but it has debatably sustained many a restriction as reasonable and rejected the American doctrine of "preferred freedoms". And crucially the right to free speech and expression does not carry a corresponding duty or an obligation to listen. How does then one ever transform the freedom of speech and expression into a right coupled with a duty to be listened to by those who rule?

This leads us to the first concern: fear of freedom itself. We here need to recall the much forgotten work of Erich Fromm, entitled *Escape from Freedom*:¹⁷ he there (and his subsequent works) developed an elaborate schema of social character, as a repository within individual self of the social structural attributes describing the "average family" as the "psychic agency" of society" where "the child acquires character which makes him want to do what he has to do and the core of which he shares with most

members of the same social class or culture".¹⁸ Depending on the nature and attributes of response to political power, Fromm developed three types of social character: the 'authoritarian', the 'market',¹⁹ and the 'necrophilous'²⁰ character. It is in authoritarian character that we find most manifest the fear of freedom. On the one hand, it would be natural for feelings of "resentment or hostility" to "arise against the exploiter, subordination to whom is against one's own interests" but often, on the other hand, "as in the case of a slave, this hatred would only lead to conflicts which would subject the slave to suffering without a chance of winning". Therefore, "the tendency will usually be to repress the feeling of hatred and sometimes even to replace it by a feeling of blind admiration"; this serves "two functions: (1) to remove the painful and dangerous feeling of hatred, and (2) to soften the feeling of humiliation".²¹

Fromm's remarkable conclusion was that the authoritarian character begins to love the very conditions as willed by fate that remains courageous in the acts of suffering submission to the authority. It is this suffering submission to authority which is the obverse of the freedom to dissent. From Fromm we learn many things²² but the most crucial is the escape from freedom which consists in renouncing (in self) and denouncing dissent (in others). This generalised fear—the fear of fear itself—is writ large in nearly the first two decades of the 21st century of neoliberal and hyperglobalising societies. What may be left of the future of dissent should interest us all. Rabi Ray, who expressed constitutional and moral anxieties about dishonest dissent, had he been with us today, would have been among the foremost Gandhian socialists to vigorously lead a public debate. We may do no better than to emulate him.

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1. Rabi Ray: Reminiscences, at 99–105 (Bhubaneswar, Lohia Academy, 2015, being tributes on the occasion of Rabi Ray's 90th Birth Anniversary).

2. Id., at 125–26.

3. Id., at 26.

4. C.K. Jain reproduces the text of the ruling in his warm tribute: see, Note 1 at 61–62.

5. See, Colin N. Waters, Jan A. Zalasiewicz, Mark Williams, Michael A. Ellis and Andrea M. Snelling, "A stratigraphically basis for the Anthropocene?", Geological Society, London, Special Publications, 395, 1–21(2014); first published online March 24, 2014, <http://dx.doi.org/10.1144/SP395.18#> [<http://dx.doi.org/10.1144/SP395.18#>] The Geological Society of London, 2014.

6. Paul J. Crutzen, "Geology of Mankind", Nature, 415, 23 (2002); Paul J. Crutzen and Eugene F. Stoermer, 'Anthropocene', Global Change Newsletter, 41, 17–18 (2000).

7. Such as draughts, desertification, deforestation, rising sea levels, some meltdown of the Arctic glaciers, extreme weather changes, greenhouse gas emissions, loss of species, and demographic explosion.

8. The era of human-made harm (global warming and climate change plus) is now well-accepted by all, except some strange unscientific leaders and political actors who still persist in sheer climate change denialism. No doubt, they aggravate real harm to humans, all other species, and the planet. On the 25th anniversary of their first 'Warning to Humanity', more than 15,000 world scientists issued a second warning, summoning urgent action towards and urging that 'great change in our stewardship of the Earth and the life on it is required, if vast human misery is to be avoided'. They pleaded for the stabilisation of the world population, the substantial reduction of greenhouse gases emissions, the phasing out of fossil fuel, the diminishment of deforestation, and to resist the destruction of biodiversity. See, William J. Ripple, Christopher Wolf, Mauro Galetti, Thomas M Newsome, Mohammed Alamgir, Eileen Crist, Mahmoud I. Mahmoud, William F. Laurance, 'World Scientists' Warning to Humanity: A Second Notice' (Manuscript in press with BioScience). The Second Warning calls for a thirteen-point agenda of 'sustainability transitions'.

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13. See, Gerald A Cohen, "The Structure of Proletarian Unfreedom", Philosophy and Public Affairs, 12:1, 3–33 (1983).

14. See, Gerald A Cohen, "The Structure of Proletarian Unfreedom", Philosophy and Public Affairs 12:1. 3–33 (1983). See also the version of a second closed door experiment, Ian Carter, A Measure of Freedom (Oxford: Oxford University Press, 1999).

15. Martha C. Nussbaum, Women and Human Development: The Capabilities Approach (The Seeley Lectures, Cambridge, Cambridge University Press, 2001). See also Andrew Mason, "Worker's Unfreedom and Women's Unfreedom: Is there A Significant Analogy?", Political Studies 44:1: 75–87(1996).

16. See, Claire Grant, "Freedom and Oppression", Politics, Philosophy and Economics, 12:4, 413–425 (2013).

17. See, Fromm, E., Escape from Freedom (New York: Avon Books, 1994; original work dated 1941).

18. Id., at 60.

19. Eric Fromm, *Man for Himself* (Greenwich, CT: Fawcett Premier Books, 1990; original work published in 1947): he there described the marketing character memorably: "since modern man experiences himself as the seller and the commodity to be sold on the market, his self-esteem depends on conditions beyond his control. If he is 'successful', he is a valuable: if he is not, he is worthless. The degree of insecurity which results from this orientation can hardly be overestimated. If one feels that one's value is not constituted primarily by the human qualities one possesses, but by one's success on a competitive market with ever-changing conditions, one's self-esteem is bound to be shaky and in constant need of confirmation by others. Hence one is driven to strive relentlessly for success, and any setback is a severe threat to one's self-esteem; helplessness, insecurity, and inferiority feelings are the result. If the vicissitudes of the market are the judges of one's value, the sense of dignity and pride is destroyed" (at 72).

20. Eric Fromm, *The Heart of Man: Its Genius for Good and Evil* (New York: Harper and Row, 1964).

21. *Supra* Note 18 at 96.

22. See, for example, Raymond B. Pacquing, "The Philosophical Anthropology of Eric Fromm: The Conscious and the Unconscious in Man", http://www.kritike.org/journal/issue_15/pacquing_december [http://www.kritike.org/journal/issue_15/pacquing_december] 2014.pdf; Rainer Funk, *Erich Fromm: The Courage to be Human* (New York: Continuum, 1982) Daniel Burston, *The Legacy of Erich Fromm* (Cambridge, MA: Harvard University Press, 1991). I do not complicate this discussion by reference to Jacques Lacan's notions of desire and resistance and speculate why he did not have much conversation with Eric Fromm. But for Lacan, too, the category of fear of freedom was critical.

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Responsive Regulation and Developing Economies

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Summary. — Developing states with limited regulatory capacity might benefit from a responsive approach to regulation. Responsive regulation is a democratic ideal, incorporating notions of deliberative democracy and restorative justice. Responsive regulation conducted by regulatory networks of governmental and non-governmental actors allows for networking around capacity deficits. NGOs play a vital role in this kind of regulation. By utilizing NGOs and local social pressure, developing countries might develop a “regulatory society” model, bypassing the regulatory state. Where capacity remains limited, private bounty hunting (such as fees for successful private prosecutions) may become an appealing tool for achieving certain regulatory objectives.
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Key words — global, responsive regulation, multinational corporations, democratic theory, NGOs, networked governance

1. INTRODUCTION

Responsive regulation is an approach designed in developed economies (Ayres & Braithwaite, 1992). Most of the critiques of it are also framed within the context of developed economies (Black, 1997; Gunningham & Grabosky, 1998; Haines, 1997; but see Haines, 2003). This essay addresses the limitations of responsive regulation as a strategy in developing economies and poses some solutions to those limitations. First it is argued that developing countries mostly have less regulatory capacity than developed ones. Yet herein also lies some of the potential of responsive regulation for developing countries as a strategy that mobilizes cheaper forms of social control than state command and control. Nevertheless, responsive regulation does require a big stick at the peak of an enforcement pyramid and big sticks are expensive, as well as demanding upon state capacities in other ways.

Two new strategies of networked governance are then developed for networking around these capacity deficits. One is based on pyramidal escalation of network branching. The second is legislating for *qui tam* actions (bounty hunting by whistle blowers). When public enforcement fails to take charge, the *qui tam* alternative is private markets in bounty hunting where a whistle blower (usually someone at a senior

level inside a lawbreaking organization who knows what is going on) prosecutes and claims 25% of a regulatory penalty. Before considering responsiveness as an ideal for developing countries, the opening section of the paper considers responsiveness as a democratic ideal.

2. RESPONSIVENESS AS A DEMOCRATIC IDEAL

For Selznick (1992, p. 336), the challenge of responsiveness is “to maintain institutional integrity while taking into account new problems, new forces in the environment, new demands, and expectations.” This means responsiveness becomes a democratic ideal—responding to peoples’ problems, environments, demands: “responsiveness begins with

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outreach and empowerment . . . The vitality of a social order comes from below, that is, from the necessities of cooperation in everyday life” (Selznick, 1992, p. 465). Responsiveness means having respect for the integrity of practices and the autonomy of groups; responsiveness to “the complex texture of social life” (Selznick, 1992, p. 470). Tom Paine in the *Rights of Man* and James Madison share with Selznick the project of conceiving empowered civic virtue as at least as important to democracy as constitutional checks and balances: “power should check power, not only in government but in society as a whole” (Selznick, 1992, p. 535). So, for example, business custom shapes responsive business regulatory law and state regulators check abuse of power in business self-regulatory arrangements, and both should have their power checked by the vigilant oversight of NGOs and social movements.

Developing countries mostly have less oversight by NGOs and social movements to mobilize, less state regulatory capability and less settled, less powerful, business custom, at least in the larger business sector. Restorative and responsive regulatory theory has evolved into a deliberative, circular theory of democratic accountability, as opposed to a hierarchical theory where the ultimate guardians of the guardians are part of the state (Braithwaite, 2002; Braithwaite & Roche, 2000). This ideal is for guardians of accountability to be organized in a circle where every guardian is holding everyone else in the circle accountable, where each organizational guardian holds itself internally accountable in deliberative circles of conversation and where such circles are widened when accountability fails. Circles of widening circles. Rules remain important under a restorative and responsive model of democratic accountability, but less important than under Dicey’s hierarchical accountability up to a sovereign parliament. Rules are just one of the things that emerge from the circled circles of deliberation. Another is the interpretation of rules—interpretation comes from circles of conversation in which courts might be particularly influential, but where the interpretations that matter mostly do not come down from a court or a canonical papal interpretation of God’s will.

In this regard my conception of responsiveness differs from Teubner’s (1986) reflexiveness and Niklas Luhmann’s autopoiesis (Teubner, 1988). I do not see law and business systems as normatively closed and cognitively open. In

a society with a complex division of labor the most fundamental reason as to why social systems are not normatively closed is that people occupy multiple roles in multiple systems. A company director is also a mother, a local alderman, and a God-fearing woman. When she leaves the board meeting before a crucial vote to pick up her infant, her business behavior enacts normative commitments from the social system of the family; when she votes on the board in a way calculated to prevent defeat at the next Council election, she enacts in the business normative commitments to the political system; when she votes against a takeover of a casino because of her religious convictions, she enacts the normative commitments of her church. In extremis, wealthy business people sometimes dismantle their empires to give away their wealth for a charitable foundation. So much of the small and large stuff of organizational life makes a sociological nonsense of the notion that systems are normatively closed. Nor is it normatively desirable that they be normatively closed, as Parker (2002) has argued. Rather, there is virtue in the justice of the people and of their business organizations bubbling up into the justice of the law, and the justice of the law percolating down into the justice of the people and their commerce.

That said, responsive and reflexive regulatory theories are mostly on the same wavelength. Teubner’s regulatory trilemma is a real one (Teubner, 1986). A law that goes against the grain of business culture risks irrelevance; a law that crushes normative systems that naturally emerge in business can destroy virtue; a law that lets business norms take it over can destroy its own virtues. I am at one with Teubner in seeing it as essential to regulate by working with the grain of naturally occurring systems in business (Braithwaite, 2005a, chap. 13). We agree that it is through the “structural coupling” of reflexively related systems (or nodes of networked governance as I would prefer) that the horns of the regulatory trilemma can be escaped. Abuse of power is best checked by a complex plurality of many separated powers—many semi-autonomous nodes of networked governance (Braithwaite, 1997, pp. 311–313; Braithwaite, 2005b). All nodes of separated private, public, or hybrid governance need enough autonomy so that they cannot be dominated by other nodes of governance. Equally, each needs enough capacity to check abuse of power by other nodes so that a multiplicity of separated powers can network to

check any node of power from dominating all the others. The required structural coupling among a rich plurality of separated powers is not only about checking abuse, it is also about enhancing the semi-autonomous power of nodes of governance to be responsive to human needs (Teubner, 1986, pp. 316–318).

Nodes of governance must not only check one another's abuses, they must also assist with building one another's capacity to responsively serve human needs, to have integrity in Selznick's terms (Selznick, 1992). A regulatory node can do this, for example, through assisting to build the learning capacity of a business node to solve its environmental problems. The same idea is found in Habermas (1987) where on the one hand he notes the dangers of law as a "medium" which colonizes the lifeworld, and on the other hand notes the virtues of law as a "constitution" which enables the lifeworld to more effectively deliberate solutions to problems that are responsive to citizens.

Circled circles of guardians can include audit offices, ombudsmen, appellate courts, public service commissions, self-regulatory organizations, ministers, and NGOs. But again the deliberative capacities of all such kinds of actors tend to be less in developing economies. Responsiveness is enabled by a society with a strong state, strong markets, and strong civil society, where the strength of each institution enables the governance capabilities of the other institutions (Braithwaite, 1998). Developing countries have weaker markets that hold back the development of state capacity and a weaker state that holds back the development of all other institutions (Evans, 1995), including the institutions of civil society that can compensate for the failures of states.

From a responsiveness perspective, it follows that economies with developed, well-funded, institutions of guardianship enjoy a richer democracy than countries that cannot afford them. On the other hand, responsive regulatory theory offers a more useful theory of "what is to be done" in developing countries than statist theories. If we believe that democracy is fundamentally an attribute of states, when we live in a tyrannous state or a state with limited effective capacity to govern, we are disabled from building democracy—we are simply shot when we try to, or we waste our breath demanding state responses that it does not have the capacity to provide. But when our vision of democracy is messy—of circles of deliberative circles, there are many kinds of circles we can

join that we believe actually matter in building democracy. Democracy is then not something we lobby for as a distant utopia when the tyrant is displaced by free elections, democracy is something we start building as soon as we join the NGO, practice responsively as a lawyer, establish business self-regulatory responses to demands from environmental groups, deliberate about working conditions with our employees or employers, educate our children to be democratic citizens, participate in a global conversation on the internet, and so on.

3. RESPONSIVENESS AS AN EFFECTIVENESS IDEAL

The basic idea of responsive regulation is that governments should be responsive to the conduct of those they seek to regulate in deciding whether a more or less interventionist response is needed (Ayres & Braithwaite, 1992). In particular, law enforcers should be responsive to how effectively citizens or corporations are regulating themselves before deciding whether to escalate intervention. The most distinctive part of responsive regulation is the regulatory pyramid. It is an attempt to solve the puzzle of when to punish and when to persuade. At the base of the pyramid is the most deliberative approach we can craft for securing compliance with a just law. Of course if it is a law of doubtful justice, we can expect the dialogue to be mainly about the justice of the law (and this is a good thing from a democratic perspective). As we move up the pyramid, more and more demanding interventions in peoples' lives are involved. The idea of the pyramid is that our presumption should always be to start at the base of the pyramid first. Then escalate to somewhat punitive approaches only reluctantly and only when dialogue fails. Then escalate to even more punitive approaches only when the more modest forms of punishment fail.

The crucial point is that it is a dynamic model. It is not about specifying in advance which are the types of matters that should be dealt with at the base of the pyramid, which are the more serious ones that should be in the middle and which are the most egregious ones for the peak of the pyramid. Even with the most serious matters—flouting legal obligations to operate a nuclear power plant safely that risks thousands of lives—we stick with the presumption that it is better to start with dialogue at the base of the pyramid (see Rees,

1994). A presumption means that however serious the lawbreaking, our normal response is to try to have a dialogue first for dealing with it, to only override this presumption if there are compelling reasons for doing so. As we move up the pyramid in response to a failure to elicit reform and repair, we often reach the point where finally reform and repair are forthcoming. At that point responsive regulation means that we put escalation up the pyramid into reverse and de-escalate down the pyramid. The pyramid is firm yet forgiving in its demands for compliance. Reform must be rewarded just as recalcitrant refusal to reform will ultimately be punished.

Responsive regulation has been an influential policy idea because it comes up with a way of reconciling the clear empirical evidence that sometimes punishment works and sometimes it backfires, and likewise with persuasion (Ayres & Braithwaite, 1992; Braithwaite, 1985). The pyramidal presumption of persuasion gives the cheaper and more respectful option a chance to work first. The more costly punitive attempts at control are thus held in reserve for the cases where persuasion fails. When persuasion does fail, the most common reason is that a business actor is being a rational calculator about the likely costs of law enforcement compared with the gains from breaking the law. Escalation through progressively more deterrent penalties will often take the rational calculator up to the point where it will become rational to comply. Quite often, however, business regulators find that they try dialogue and restorative justice and it fails; they try escalat-

ing up through more and more punitive options and they all fail to deter. Perhaps the most common reason in business regulation for successive failure of restorative justice and deterrence is that non-compliance is neither about a lack of goodwill to comply nor about rational calculation to cheat. It is about management not having the competence to comply. The manager of the nuclear power plant simply does not have the engineering knowhow to take on a level of responsibility this demanding. He must be moved from the job. Indeed if the entire management system of a company is not up to the task, the company must lose its licence to operate a nuclear power plant. So when deterrence fails, the idea of the pyramid is that incapacitation is the next port of call (see Figure 1).

This design responds to the fact that restorative justice, deterrence, and incapacitation are all limited and flawed theories of compliance. What the pyramid does is cover the weaknesses of one theory with the strengths of another. The ordering of strategies in the pyramid is not just about putting the less costly, less coercive, more respectful options lower down in order to save money. It is also that by only resorting to more dominating, less respectful forms of social control when more dialogic forms have been tried first, coercive control comes to be seen as more legitimate. When regulation is seen as more legitimate, more procedurally fair, compliance with the law is more likely (Tyler, 1990; Tyler & Blader, 2000; Tyler & Dawes, 1993; Tyler & Huo, 2001). Astute business regulators often set up this legitimacy

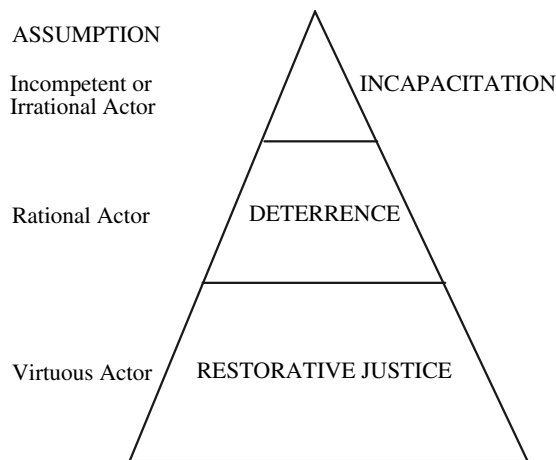


Figure 1. *Toward an integration of restorative, deterrent, and incapacitative justice.*

explicitly. During a restorative justice dialogue over an offence, the inspector will say there will be no penalty this time, but that she hopes the manager understands that if she returns and finds the company has slipped back out of compliance again, under the rules she will have no choice but to shut down the production line. When the manager responds yes, this is understood, a future sanction will likely be viewed as fair. Under this theory, therefore, privileging restorative justice at the base of the pyramid builds legitimacy and therefore compliance.

There is also a rational choice account of why the pyramid works. System capacity overload (Pontell, 1978) results in a pretence of consistent law enforcement where in practice enforcement is spread around thinly and weakly. Unfortunately this problem will be at its worst where lawbreaking is worst. Hardened offenders learn that the odds of serious punishment are low for any particular infraction. Tools like tax audits that are supposed to be about deterrence are frequently exercises that backfire by teaching hardened tax cheats just how much they are capable of getting away with (Kinsey, 1986, p. 416). The reluctance to escalate under the responsive pyramid model means that enforcement has the virtue of being highly selective in a principled way. Moreover the display of the pyramid itself channels the rational actor down to the base of the pyramid. Non-compliance comes to be seen (accurately) as a slippery slope that will inexorably lead to a sticky end. In effect what the pyramid does is solve the system capacity problem with punishment by making punishment cheap. The pyramid says unless you punish yourself for lawbreaking through an agreed action plan near the base of the pyramid, we will punish you much more severely higher up the pyramid (and we stand ready to go as high as we have to). So it is cheaper for the rational company to punish themselves (as by agreeing to payouts to victims, community service, and paying for new corporate compliance systems). Once the pyramid accomplishes a world where most punishment is self-punishment, there is no longer a crisis of the state's capacity to deliver punishment where it is needed. One of the messages the pyramid gives is that "if you keep breaking the law it is going to be cheap for us to hurt you because you are going to help us hurt you" (Ayres & Braithwaite, 1992, chap. 2).

This feature of the theory of responsive regulation is attractive for developing countries. Precisely because responsive regulation deals

with the fact that no government has the capacity to enforce all laws, it is useful for thinking about regulation in developing countries with weak enforcement capabilities. Yes certain minimum capacities must be acquired, but then the theory shows how such limited capacity might be focused and leveraged.

Paternoster and Simpson's research on intentions to commit four types of corporate crime by MBA students reveals the inefficiency of going straight to a deterrence strategy (Paternoster & Simpson, 1996). Paternoster and Simpson found that where the MBAs held personal moral codes, these were more important than rational calculations of sanction threats in predicting compliance (though the latter were important too). It follows that for the majority of these future business leaders, appeals to business ethics (as by confronting them with the consequences for the victims of corporate crime) will work better than sanction threats. So it is best to try such ethical appeals first and then escalate to deterrence for that minority for whom deterrence works better than ethical appeals.

Because states are at great risk of capture and corruption by business, even greater risk where regulatory bureaucrats are poor, Ayres and Braithwaite argue for the central importance of third parties, particularly NGOs, to be directly involved in regulatory enforcement oversight (Ayres & Braithwaite, 1992, chap. 3). But NGOs do more than just check capture of state regulators; they also directly regulate business themselves, through naming and shaming, restorative justice, consumer boycotts, strikes, and litigation they run themselves. Responsive regulation comes to conceive of NGOs as fundamentally important regulators in their own right, just as business are important as regulators as well as regulatees (see also Gunningham & Grabosky, 1998; Parker, 2002).

Pyramid design is a creative, deliberative activity. Stakeholders can design pyramids of actual sanctions like a "warning letter" or "civil penalty." Or they can design a pyramid of regulatory strategies—for example, try regulation by the price mechanism of the free market first, then try industry self-regulation, then a carbon tax regime, then a command and control regime that permits licence revocation for power plants that fail to meet pollution reduction targets. Regulators that think responsively tend to design very different kinds of pyramids for different kinds of problems—for example, the Australian Taxation Office has a different kind

of pyramid for responding to transfer pricing by multinational companies than it deploys with the same companies when they “defer, delay, and deny” access to company records (Braithwaite, 2005a, part II).

As with responsiveness as a democratic ideal, so with responsiveness as an effectiveness ideal, the theory appears to be one where developing countries are less likely than wealthy states to enjoy the conditions to make it work. Not only are state regulatory bureaucrats more vulnerable to corruption because of their poverty, NGOs have fewer resources to do the oversight to guard against this than do NGOs in rich countries. More fundamentally, weaker states lack the organizational capacity to be responsive. They have fewer regulatory staff and less educated staff to come to grips with the more reflexive approach of responsive regulation. Perhaps factory inspectors in weak states do have the capacity for some of the more important kinds of command and control regulation like ensuring that hazardous machinery is guarded, but they are less likely to have the analytic resources to assess a “safety case”—an occupational health and safety self-regulatory plan. Developing country tax officials might do quite well at taxing immobile assets like land, but may not have enough highly educated staff to implement responsive regulatory strategies that states like Australia can use against international profit shifting to recover a billion dollars in avoided tax for every million dollars spent on the enforcement (Braithwaite, 2005a, chap. 6).

Empirical studies of developing states show great variation in state capacity (see, e.g., Evans, 1995; Kohli, 2004). While in general, Evans does not find the problem of developing economies as too much bureaucracy, but of not enough, he discerns huge differences between predatory states like Mobutu’s Zaire where bureaucratic competence is systematically destroyed, developmental states such as Korea where it is nourished, and in-between states such as India and Brazil where state capacity in the early 1990s was uneven, but where bureaucratic learning and construction of state capacity did occur (Evans, 1995, pp. 12–70).

4. NETWORKING AROUND CAPACITY DEFICITS

Braithwaite and Drahos (2000) concluded from their interview-based research that the

most important regulators of corporate fraud and accounting standards in developing economies were the major global accounting firms. In comparison, developing country corporations and securities regulators mostly have very limited standard setting capability, let alone enforcement capability. Professionals and other non-state gatekeepers did more of the regulating of business in what are today developed economies as we go back through their histories to when they were developing economies. Even in the United States we only need to go back to the 1920s for a pre-SEC world where accountants and private partnerships called stock exchanges did all the work that mattered in the regulation of corporations, securities, and accounting standards (McCraw, 1984).¹ Until quite late in the 20th century, the city of London flourished through a gentlemen’s club model of regulation, where accounting standards that entered commerce through the accounting profession were internalized by “decent chaps” who learnt the standards they had to meet to avoid being ostracized to the margins of the City’s circles of gentlemen (Clarke, 1986; Moran, 2003). Arguably it was only in the 20th century that the Bank of England became a more important prudential regulator than the Rothschilds, that JP Morgan ceased being the most important prudential regulator in the United States (Braithwaite & Drahos, 2000, chap. 8).

For many decades after the West’s industrial revolution began, we see very different ways in different metropolises that regulation is networked by a plurality of private, professional, and state actors. Only slowly after the New Deal do we see the transformation of regulatory thinking to the ideal of a state regulator being ultimately in charge of a regulatory domain. No sooner had this transformation been consolidated when what some like to refer to as a post-regulatory state (Scott, 2004; Teubner, 1986)² began to develop—a social order where regulation pluralizes again as NGOs find new capacities and competition policy drives professions to innovate into new markets in regulatory evasion and new markets in private regulation (“markets in vice, markets in virtue”) (Braithwaite, 2005a). Law firms that specialize in product liability litigation become important new regulators of business, NGO environmental regulators form partnerships with retailers to regulate the certification of forest products or the certification of coffee as organically grown (Courville, 2003).

Transparency International regulates corruption through publicizing where high levels of corruption prevail, as do ethical investment funds and their analysts. New kinds of rating agencies like Reputex rate corporate social responsibility (*Reputation Measurement, 2003*). Indeed the older rating agencies like Moodys and Standards and Poors are becoming increasingly important regulatory threats to businesses with major environmental and ethical risks to their operations that can peg back their credit rating. Finally, international regulators such as the Basle committee, environmental treaty secretariats, and the International Telecommunications Union become increasingly important. *Braithwaite and Drahos (2000)* conclude that in shipping regulation and some other domains, the era when state regulators are more in charge than private regulators, such as Lloyds of London, and global ones such as the International Maritime Organization, is remarkably short. *Slaughter (2004)* sees regulation as the area where transgovernmental networks become pre-eminently important as fonts of governance.

Like *Slaughter (2004)*, *Castells (2000a, 2000b, 2000c)*, *Drahos (2004)*, *Rhodes (1997)*

(*Bevir & Rhodes, 2003*) and others, I have become persuaded that we live in an era of networked governance. An implication of this is that developing countries might jump over their regulatory state era and move straight to the regulatory society era of networked governance. Developing states might therefore cope with their capacity problem for making responsive regulation work by escalating less in terms of state intervention and more in terms of escalating state networking with non-state regulators. *Figure 2* represents this idea which comes from *Drahos's* insight that networked governance could be of service to responsive global regulation that works better for developing countries (*Drahos, 2004*). At the base of the pyramid, the developing state relies upon business self-regulation. When self-regulation fails, it networks two other non-state regulators. When that fails, it networks two more, and so on.

In *Figure 2* the developing state enrolls more (*Latour, 1986*) and more NGOs, industry association co-regulators, professionals, other gatekeepers, and international organizations to its regulatory project. In addition to such non-state actors it might also enrol other states as

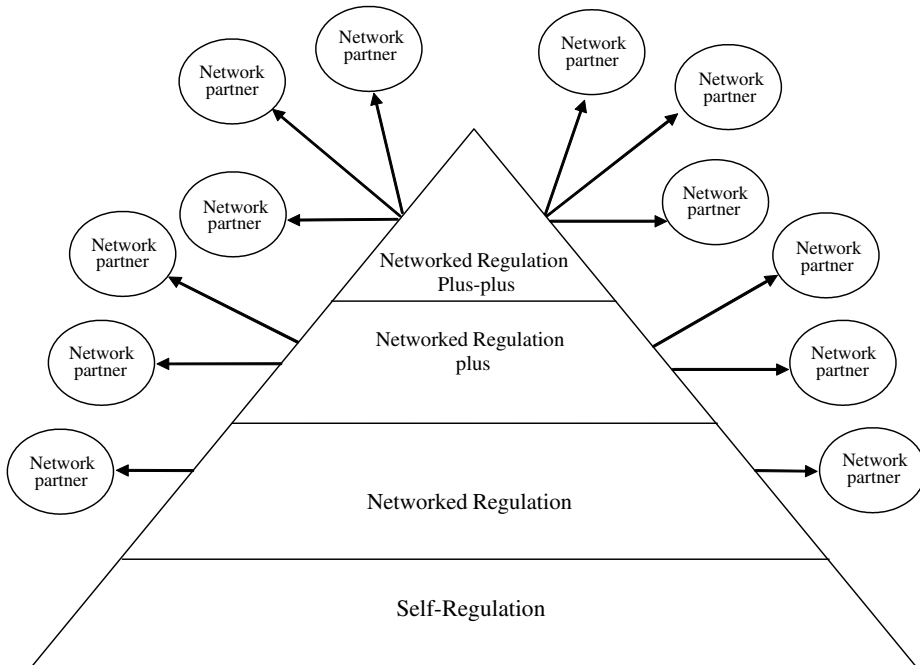


Figure 2. A responsive regulatory pyramid for a developing economy to escalate the networking of regulatory governance.

regulators within its own boundaries. For example, an Indonesian state with weak capacity to control people smuggling businesses that move desperate people from states such as Afghanistan on boats that stop in Indonesia (often in transit to Australia), enrolls the regulatory and intelligence capabilities of officers of the Australian state based in Indonesia. In some domains of regulatory enforcement, such as that against pirating of intellectual property rights, developing states rely less on state regulators than on foreign enforcers with an interest in the enforcement. In many developing country capitals, the most powerful regulatory agency in town has a red and white striped flag out in the front. This kind of regulation is not enacted by a monolithic foreign state, but by functionaries of specific agencies which are part of the same transgovernmental network as the domestic state regulator. Slaughter (2004) explains that contemporary state power is disaggregated into the hands of distinct regulators and then re-aggregated into transgovernmental networks. The police attaché in a foreign embassy may have more allegiance to some of the domestic police she works with than to her own country's Ambassador. She may share more secrets with her police network than she would ever share with her ostensible boss, the Ambassador. In extremis, she might even do things like conspire within a transnational policing and security network in assassination plots aimed at major transnational criminals in circumstances where the Ambassador would view this as abhorrent and unauthorized.

While Slaughter goes too far in conceiving the networks that matter in regulatory space as fundamentally transgovernmental, as opposed to networks of private and public regulators, her empirical assertion that it is regulators from different states who put most of the grunt into such networks is worthy of testing in future research. Moreover her complementary normative claim deserves to be taken seriously and rigorously examined in future normative research. This is the claim that only states, or perhaps only democratic states, are likely to have a claim to the legitimacy to organize transnational networks in a way that will be accepted as public regarding.

Nevertheless, I expect Slaughter would concede that there are some developing countries where the most effective regulator of corporate abuses of human rights is an NGO. This is especially likely in one of "Evan's" "predatory states" that mostly has little interest in securing

human rights. One reason as to why the domestic NGO can be the more potent human rights regulator than the domestic state is that, unlike its state, this NGO is interested in networking with an international NGO that has people on the ground like Human Rights Watch, with UN Human Rights agencies, with the woman in the US Embassy with a watching brief on human rights, investigative journalists, and so on. Figure 3 represents the responsive regulatory strategizing such an NGO might do to enforce human rights norms.

Note that in Figure 3 the NGO as regulator can be conceived as either a regulator of business human rights abuses, or as a regulator of states—either for their failure to regulate corporate human rights abuses or for the state's own abuses. There is of course still a capacity problem in the fact that Figure 3 imagines developing country NGOs as initiators of responsive regulation when we know that NGOs are thinner on the ground than they are in developed economies and more poorly resourced. On the other hand, the evidence is that while NGOs are growing fast in both the developed and developing world, the growth rate is fastest in the developing world (Commission on Global Governance, 1995, p. 33). Secondly, the growth of international NGO presence on the ground in developing countries has been considerable in recent decades. Hence, where there is no local human rights NGO, or where all its key players have been murdered, Human Rights Watch might step in to network the naming and shaming, networking with investigative journalists, and to nurture the creation of new domestic human rights NGOs. Either way, it is the networking of responsive escalation that is advanced as a path around the developing economy's capacity problem for enforcing standards.

Obviously, existing networks of governance in many developing countries are more oriented to crushing human rights than to enhancing them. Extant networks of global governance are more oriented to advancing the interests of the G7 and the European Union than those of developing countries. Even within developed economies, networked NGO power or the networked governance capabilities of state regulators is often miniscule compared to networked corporate power. But the question of interest here is how a developing country's regulators, or NGOs with the interests of poor at heart, might act in such a world of networked governance where extant networking favors the rich

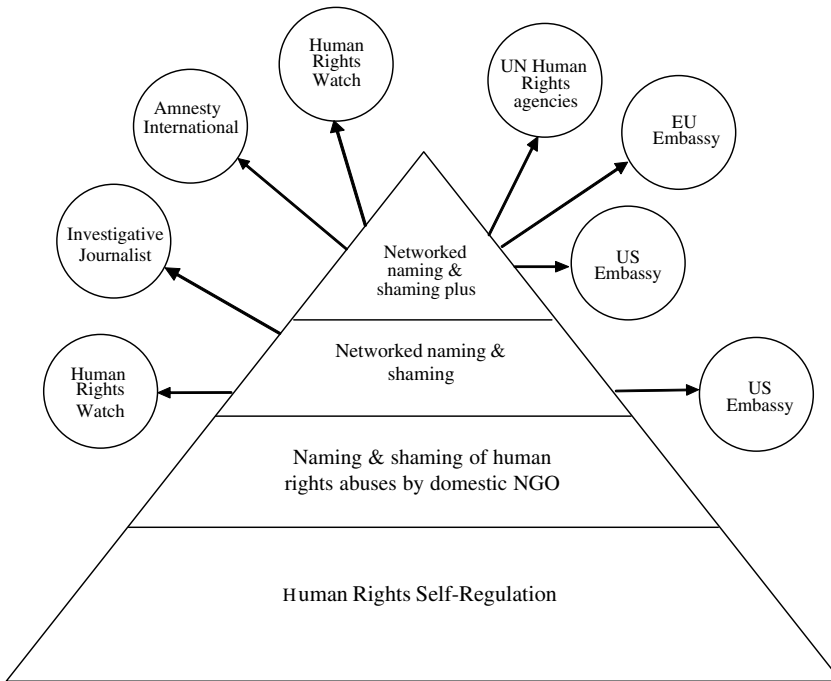


Figure 3. *Regulatory pyramid for a developing country human rights NGO seeking to escalate networked regulation for human rights.*

and the abusers of human rights. The answer proffered is to network. It is that weaker actors can become stronger by networking with other weaker actors. Beyond that, Braithwaite and Drahos (2000) show that the interests of the strong are not monolithic, that the weak can often enrol the power of one strong actor against another. The human rights or environmental NGO can enrol the clout of the European Union against the behavior of the United States or its corporations in developing economies, or the United States can be enrolled against the European Union (see, e.g., Braithwaite & Drahos, 2000, pp. 264–267). In a world of networked power, however much or little power you have, the prescription for potency is not to sit around waiting for your own power to grow (by acquiring more wealth or more guns, for example). Rather the prescription is to actively network with those with power that you do not yourself control.

Clearly responsively escalating networked regulation is something states can do by enrolling NGOs, and NGOs can do by enrolling state agencies of different kinds. Business actors, like accounting firms regulating corporate account-

ing standards, can also responsively escalate networked regulation by enrolling state agencies and NGOs. Networked governance is about the observation that all of these kinds of actors do interact in networks and do enrol one another, sometimes in conflicting projects, sometimes in synergy. Figure 4 shows a network of governance actors of these different kinds, where only two of the actors—*X* and *Y*—have a sufficiently nodal set of ties to mount a pyramid of escalating networked regulation. The other actors in the network do not have enough links to enrol the networked escalation required for responsive regulation.

Where *X* and *Y* have a shared regulatory objective—say improving the integrity of accounting standards or anti-corruption measures in a developing country—the synergies between their regulatory pyramids create the potential for considerable regulatory potency. This potency is based on a redundancy where the weaknesses of a state regulator may be compensated by the strengths of NGO or business regulators. The concomitant danger is that the very sharing of the regulatory objective by the only actors with the capability to escalate

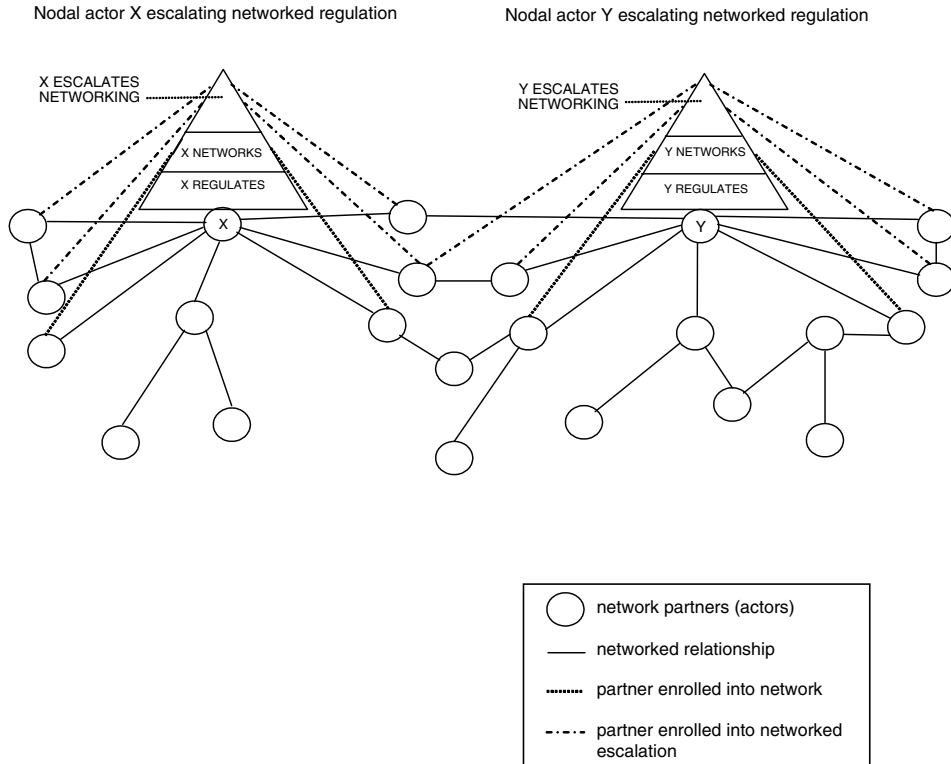


Figure 4. A network of governance in which just two nodal actors have a capacity to escalate networked regulation.

networked regulation means that their convergent power may be unchecked.³ If the consensual synergies among different pro-regulation constituencies are excessively hand in glove, overregulation is a risk.

In developing economies the greater risk is the reverse: big business networked with ruling families dominate an anti-regulation consensus lubricated by bribery and extortion. The civic republican ideal (Braithwaite, 1997, 1998; Pettit, 1997) is that pro-regulation and anti-regulation actors can both mobilize effective networked escalation as a check on domination by any one form of networked power. When fundamental labor rights are being crushed, the local trade union can escalate up to networked support from a state ministry of labor, the International Confederation of Free Trade Unions, the labor attaché at the US Embassy, the Campaign for Labor Rights, the Clean Clothes Campaign, or Oxfam International. When a firm is at risk of being driven out of business by unsustainable demands from a trade union with formidable ability to enrol political elites and industrial muscle, the firm

can network escalated resistance from pro-business agencies of the state, industry associations, and the like. The republican ideal is that such contestation should occur to prevent domination; the responsive ideal is that it happens responsively. The combined ideal is that pyramidal escalation to contest domination drives contestation down to the deliberative base of the pyramid, so that regulation is conversational (Black, 1997) rather than based on deterrence or incapacitation (see Figure 1). The capacity of the labor union to escalate to strikes, networked naming and shaming, networked state enforcement, drives the company down to restorative justice at the base of the pyramid. The capacity of the company to escalate to litigation or political pressure to halt the union's tactics drives the union down to negotiated problem solving at the base of the pyramid. Credible capacity of both sides to escalate in ways that threaten win-lose outcomes gives both the incentive to deliberate collaboratively in search of a win-win solution. Of course extant realities of power in any society are unprincipled, fraught with countless

dominations of the weak by the strong. The perspective here does no more than supply a perspective on a direction to struggle and a way to struggle, however weak one's constituency, for more principled checking of any and all abuses of power.

The intersection of the theories of networked governance, responsive regulation, and republican separations of powers is a fruitful topic for more detailed research, especially for developing economies: "The more richly plural the separations into semi-autonomous powers, the more the dependence of each power on many other guardians of power will secure their independence from domination by one power" (Braithwaite, 1997, p. 312). Contrary to Montesquieu's clear conception of a separation of public powers between executive, judiciary, and legislature (Montesquieu, 1989), there is virtue in many unclear separations of public and private powers. This republican virtue is especially present where each separated power can enrol others through networks of governance. Regulators have powers separated between the public and the private, within the public, and within the private sphere, where separations are many and transcend private-public divides (Braithwaite, 1997). Nodes of governance need to be sufficiently networked to be able to check the power of one node from dominating other nodes of governance.

In developed economies there is what some regulatory scholars call a dual economy (Haines, 1997) where very different regulatory strategies may be required with large business than with small and marginal businesses. In developing economies we need to take this further down to a third village-level informal economy that is typically untaxed and almost entirely unregulated by the state. Village reputation networks often regulate this economy more effectively than the regulation of national companies and multinationals that congregate in the large cities. Village elders may have persuasive means of sitting down local traders in some sort of traditional restorative justice process when, for example, they cheat on weights and measures. This was also true of the 18th century informal "police" of European towns and parishes that we see discussed in the writings of the likes of Adam Smith (1978). At the level of national companies in developing economies we hypothesize that national NGOs can sometimes network with state regulators to improve the responsiveness of regulation. And it is at the level of regulating Northern multina-

tionals that it is hypothesized that international NGOs, disaggregated fractions of Northern states and auditors from the multinational's own corporate headquarters must be enrolled to the (much more difficult) regulatory challenge of exploitation by global corporations.

5. BOUNTY HUNTING AROUND CAPACITY DEFICITS

In 2002 ranking US Republican on the Senate Finance Committee, Charles Grassley, called for public disclosure of corporate tax returns (Stratton, 2002, p. 220). The call was motivated by the vast difference between the numbers in Enron and WorldCom's tax returns and their financial statements to the stock exchange. The argument was that if investors had access to the tax return data, analysts might have detected the fraudulent books before the company went down. Canellos and Kleinbard have argued that this would not work: what would be more useful for both tax auditors and investors would be to have access to a public book-tax reconciliation schedule which would "provide a useful platform for highlighting transactions which are likely to involve manipulation for tax and accounting concepts" (Canellos & Kleinbard, 2002, p. 2). Sims (2002) suggested that making corporate returns available in a useful form on a website would enable a system of rewards for private auditors (bounty hunters) who brought new tax shelters to light. To motivate private auditors to pick over corporate tax returns in search of shelters, Sims suggests a bounty of say 20 cents in every dollar recovered by the tax authority payable by the taxpayer to the private auditor on top of any other tax penalty. "The most effective way of channelling sufficient resources into prevention is to make it as profitable to police corporate shelters as it has obviously become to purvey them" (Sims, 2002, p. 736).⁴

The idea is an old one that can be applied to all domains of regulation (Crumplar, 1975). During the 14th and 15th centuries when the English state was weak in its enforcement capability, *qui tam* suits were relied upon heavily.⁵ An offender against laws subject to *qui tam* could be compelled to pay half the penalty incurred to an informer. Abuses of private prosecutions became so rife that *qui tam* fell into disrepute and disuse. Five centuries later in the United States, Senator Grassley sponsored

1986 revisions to the False Claims Act that put *qui tam* on a more principled footing (Department of Justice, 2003; Grassley, 1998). Since then, over US\$12 billion, \$2.1 billion in 2003, has been recovered in *qui tam* actions concerning false claims to the US government, mostly for defrauding federal health programs or the defence budget (Department of Justice, 2003; <http://www.falseclaimsactatpaceandrose.com>). This historically recent American *qui tam* has proved less rife with abuse than its English precursor because the whistle blower against say a defence contractor who is fraudulently extracting payments from the Pentagon must first give the Department of Justice a chance to take over the action. If Justice wins, the whistle blower gets 15–25% of any settlement or judgment attributable to the fraud identified by the whistle blower. Justice decides to take on most of the meritorious False Claims Act actions because if the case is meritorious and Justice declines to take it over, the whistle blower's legal team can still take a private action and win 30% of the penalty, leaving the revenue poorer and the Justice Department embarrassed by an error of judgment. On the other hand, legal counsel for a whistle blower with an unmeritorious case will counsel caution once the Department of Justice declines to take over the prosecution. Most whistle blowers who launch *qui tam* actions are middle managers or senior management from the corporation complained against. Hence, just as Slaughter's transgovernmental networks disaggregated states, *qui tam* disaggregates corporations, turning one part of a corporation (the whistle blower cum bounty hunter) against lawbreaking parts of the same organization.

Qui tam in effect networks whistle blowers with law firms, state regulators, and prosecutors, extending the intelligence, evidence-gathering, and litigation capabilities of the state in big, difficult cases. The reason why *qui tam* was invented in 14th century England was to compensate for weakness in state regulatory capacity. The 1863 False Claims Act was first introduced by a Lincoln administration in the United States that had little federal prosecutorial capacity to go after fraudulent over-billing of the Union Army. Across the globe today it still might be true that where state capacity is weakest the case for reliance on *qui tam* is strongest. Obversely, where state regulatory capacity is strong, private prosecution to fill gaps left gaping by failed public enforcement is less critical. In this sense, *qui tam* in the Uni-

ted States should be a least likely case of *qui tam* adding value (Eckstein, 1975). The fact that it clearly has added value there in the context of False Claims Act enforcement (Department of Justice, 2003; Grassley, 1998) should give hope that *qui tam* might prove valuable in weak states where opportunities for bounty hunting are more plentiful.

On the other hand, if the court system and justice bureaucracy themselves in a developing country are so inefficient or corrupt that they cannot cope with surges of *qui tam* actions, then these greater opportunities may simply not be practically available to be seized. Even in such circumstances, a strategy that can rely on private resources to do much of the justice bureaucracy's work for it has more prospects than reliance on a wholly public process. The new Grassley proposals on making corporate tax returns more effectively public on the internet so that a private tax auditing industry might emerge need not depend on courts. It could work by practitioners in this new private market in tax virtue, taking the finding of their private analysis to the public tax authority. If the tax authority administratively assesses an extra \$10 million dollars in tax that the corporation voluntarily pays or settles (which is what normally happens) then the private tax auditor might win her \$2 million *qui tam* payout without going near a courthouse. Note also how the private auditor can help make responsive regulation work by being a check on corrupt tax officers, prosecutors, and other officials (see Ayres & Braithwaite, 1992, chap. 3). When the corrupt official reaches a cosy settlement with the corporation that fails to collect the tax owed, the private auditor has an interest in exposing this to his administrative and political masters who have an interest in higher tax collections, and to the courts if necessary, in order to collect the full bounty owed to the private auditor.

Enforcement of labor standards is another area where *qui tam* has been advocated (Braithwaite, 2004). Private prosecutions by trade unions for underpayment of wages, where the union could collect 30% of the penalty imposed on the company, would mostly work by threatening the private prosecution in order to trigger settlement negotiations, while rarely in practice having to rely on an overburdened court system.

Networking with lawyers who specialize in *qui tam* actions against multinational companies would be networking with lawyers who in some cases could mount actions in foreign

courts against multinationals—thereby obviating the need to rely on courts in the poor country. While it is unimaginable that False Claims statutes to compensate developing states could be enforced in Western courts, in tort cases like the Bhopal chemical pollution disaster in India and the litigation against BHP⁶ by Papua New Guinea villagers over the destroying of their livelihoods by the pollution of the Fly River, globally networked law firms have had major impacts on multinationals.

6. CONCLUSION

We have argued that developing economies are more lacking in all the capacities necessary to make responsive regulation work well than are wealthy societies. In attempting to lay a foundation for policy ideas to compensate for this, the essay overgeneralizes these deficits. Some larger developing societies such as India have strong democratic states with substantial, sophisticated bureaucracies and courts. Many “failed states” such as Afghanistan are strong societies with formidable regulatory capacities in civil society through institutions such as *jirga* (Wardak, 2004).

Whatever the level of these deficits, in an era of networked governance, weaker actors can enrol stronger ones to their projects if they are clever. Slaughter’s work suggests that the globe is strewn with disaggregated bits of strong states that might be enrolled by weak ones (and by weak NGOs) (Slaughter, 2004). The developing country civil aviation regulator can enrol the US Federal Aviation Administration to stand up to an airline that flouts safety standards in the developing country; the developing country health regulator can enrol the Food and Drug Administration to audit the unsafe clinical trials on a new drug being conducted on its people. Developing country NGOs may be weak, but are becoming stronger both in their own right and in their capacity to enrol Northern NGOs and international regu-

latory organizations into projects to compensate for the weak regulatory capacities of developing states. Responsive escalation up a regulatory pyramid can hence be accomplished not only by escalating state intervention, but also as Drahos (2004) suggested, by escalating the networking of new tentacles of domestic and transnational governance. The core idea of responsive regulation as a strategy actually has special salience for resource-poor states. This is the idea that no regulator has the resources to consistently enforce the law across the board and therefore limited enforcement resources need to be focused at the peak of an enforcement pyramid. Networking escalation is an interesting elaboration of how to make the most of limited regulatory capacity.

Finally, we have seen that mobilizing public virtue to regulate private vice is not the only path around capacity deficits. Private markets in virtue can also be mobilized to regulate vice, indeed to flip markets in vice to markets in virtue (Braithwaite, 2005a). One example is enabling bounty hunting by privatized tax auditors through making crucial information on corporate tax returns public on the internet. Another is the kind of *qui tam* actions under the False Claims Act that have significantly cleaned up the US defence contracting industry since 1986. Where state capacity is weakest, both *qui tam* and responsive escalation via networking with progressively more private and public enforcers should pay the highest dividends. Moreover, networking regulatory partnerships also structurally reduces the benefits of capture and corruption in those developing economies that are endemically prone to corruption. Responsive regulation is a worrying strategy in corrupt societies because it puts more discretion in the hands of regulatory bureaucrats who can use that discretion to increase the returns to corruption. Both the strategies of networking around state incapacity and mobilizing private markets for enforcing virtue have the attractive feature of exposing and preventing regulatory corruption.

NOTES

1. On the history of the legal profession as a regulatory partner of the US state, see Halliday (1987).
2. Obviously I am uncomfortable about the concept of the post-regulatory state because I think that for most of human history a large part of the regulation that matters most has not been undertaken by states.
3. Rhodes made the following insightful comment on a earlier draft of this paper: “I worry policy networks

are a form of political oligopoly. They privilege some interests and specifically exclude others. Moreover, they colonize specific policy arenas. So there is no competition/regulation within either a network or an arena, only between networks, and that is restricted because their interests are often too confined to one arena and do not span them." I am indebted to Rhodes for stimulating the reflections in this paragraph.

4. On the effectiveness of private bounties for detecting corporate wrongdoing generally, see Fisse and Braithwaite (1983, pp. 251–254, 283).

5. The Latin "qui tam pro domino rege, quam pro se ipso in hac parte sequitur" translates as "who as well for the king as for himself sues in this matter."

6. Now BHP Billiton.

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10

The Environment

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INTRODUCTION

INDIA IS RANKED 177th out of 180 countries on the 2018 Environment Performance Index;¹ 275 rivers in the country are polluted;² 6.3 crore people in rural areas do not have access to potable water;³ 228 out of 280 cities in India do not comply with air quality standards for particulate emissions and 180 million people in these cities are exposed to levels that are twice the prescribed standards;⁴ and 6,407 sq km of dense forests were lost in just the last two years.⁵ Environmental health across indicators in India is rapidly declining and the Indian state's failure to regulate sources of, and causes for, environmental degradation has never been more apparent. The reasons for this failure are numerous and complex: conflicting interests in limited resources; inadequate regulatory capacity to design and enforce the law effectively; lack of interagency coordination; and environmental issues not being politically salient enough to trump competing policy interests and priorities. As the country grapples with an increasing array of environmental problems, which vary in terms of their magnitude and urgency, it is an important moment in time to reflect on the nature and quality of the environmental regulation that is in place.

Environmental regulation is a broad term that includes the law promulgated by the legislature and interpreted by the courts, as well as other forms of social control

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¹Yale Center for Environmental Law & Policy and Center for International Earth Science Information Network, Columbia University, *2018 Environmental Performance Index* (Yale University, 2018).

²Central Pollution Control Board (CPCB), *River Stretches for Restoration of Water Quality* (CPCB, 2015).

³Rosie Stewart, *Wild Water: The State of the World's Water 2017* (WaterAid, 2017).

⁴Harshit Sharma, Lauri Myllyvirta, and Sunil Dahiya, *Airpocalypse II: Assessment of Air Pollution in Indian Cities* (Greenpeace India, 2018), https://www.greenpeace.org/archive-india/Global/india/2018/Airpocalypse_II_29Jan18.pdf.

⁵Kumar Sambhav Shrivastava, 'Hold the Celebrations: Marginal Increase in India's Forest Cover is Masking Massive Deforestation' *Scroll.in* (15 February 2018), <https://scroll.in/article/868606/hold-the-celebrations-marginal-increase-in-indias-forest-cover-is-masking-massive-deforestation>.

which harness the state's authority along with that of the market, businesses and civil society to control the use (and abuse) of environmental resources and promote their conservation.⁶ However, in the present discussion, I adopt a somewhat limited definition of environmental regulation: formal laws legislated by the Indian Parliament, the manner in which they are implemented, the actors responsible for their implementation, and their capacity to discharge their responsibilities.⁷ I am consciously locating the Indian state (through its agencies) as a central actor, as it plays (and is likely to play in the foreseeable future) a dominant role in shaping and implementing environmental regulation in the country. This is not to underplay the very important role of other actors and processes in determining the level of protection accorded to the environment in the country – including businesses and their decisions to protect investments, shareholders and reputations; civil society campaigns; international scrutiny; and policy choices made for other, frequently incompatible, developmental imperatives.

While some forms of environmental regulation may be traced back to ancient Indian texts which prohibited injury to certain species of flora and fauna, the Indian Penal Code 1860 (IPC) is considered to be the beginning of modern environmental regulation in India.⁸ The IPC introduced penalties for 'fouling water of public spring or reservoir' and for 'vitiat[ing] the atmosphere ... so as to make it noxious to the health of persons'.⁹ At around the same time, the colonial government introduced a law to manage forests to sustain supply of timber for railway sleepers.¹⁰ Wildlife protection also began to receive legislative attention,¹¹ although the motivation may have also been to ensure adequate prey for royal hunts.¹² Several other legislations passed by the colonial government, such as the Easements Act, 1882, the Bengal Smoke-Nuisances Act, 1905 and the Bombay Smoke-Nuisances Act, 1912, also had some bearing on environmental issues.

The Constitution of India of 1950 did not contain specific provisions on the protection of the environment. Constituent Assembly debates on natural resources and agriculture took place in the context of federalism and which level of government should be given the administrative mandate.¹³ The 42nd amendment to the Constitution in 1976 introduced Article 48A (a Directive Principle of State Policy to protect

⁶ Neil Gunningham, 'Environment Law, Regulation and Governance: Shifting Architectures' (2009) 21(2) *Journal of Environmental Law* 179, 181.

⁷ See Timothy F Malloy, 'The Social Construction of Regulation: Lessons from the War against Command and Control' (2010) 58(2) *Buffalo Law Review* 267, 268, where the author uses the concept of 'regulatory system' to 'include the formal structure and substance of the law, the manner in which it is implemented, and the capacities and activities of the implementing entities'.

⁸ CM Jariwala, 'Changing Dimension of Indian Environmental Law' in P Leelakrishnan (ed), *Law and Environment* (Eastern Book Company, 1992) ch 1.

⁹ Indian Penal Code 1860 (IPC), ss 277 and 278.

¹⁰ Madhav Gadgil and Ramachandra Guha, *This Fissured Land: An Ecological History of India* (Oxford University Press, 1992) ch 4.

¹¹ For example, the Madras Wild Elephants Preservation Act, 1873, the Elephants Preservation Act, 1879 and the Wild Birds and Animals Protection Act, 1912.

¹² Mahesh Rangarajan, *India's Wildlife History* (Permanent Black, 2001) ch 4.

¹³ K. Sivaramakrishnan, 'Environment, Law, and Democracy in India' (2011) 70(4) *Journal of Asian Studies* 905, 906.

and improve the environment and safeguard forests and wildlife) and Article 51A(g) (a fundamental duty of every citizen to protect and improve the natural environment). It also moved two entries – forests and protection of wild animals and birds – from the State List to the Concurrent List in the Seventh Schedule.

Since independence, regulations addressing different aspects of the environment – wildlife, forests, water, air and biodiversity – have developed in India at the national and sub-national levels. A mix of primary and secondary legislation and administrative actions, along with their judicial interpretation, establish the formal legal foundation of these regulations. A large network of institutional arrangements involving government departments, regulatory agencies and other statutory bodies, independent research institutions and laboratories and the judiciary, is responsible for implementing and facilitating the implementation of these regulations.

This chapter will focus on one set of environmental regulations – regulations preventing and controlling water and air pollution, and it will analyse, in particular, the design and implementation of two laws passed by the Parliament – the Water (Prevention and Control of Pollution) Act, 1974 (hereinafter the Water Act) and the Air (Prevention and Control of Pollution) Act, 1981 (hereinafter the Air Act).¹⁴ The two Acts are similarly designed and are implemented by the same regulatory agencies, and regulated entities occasionally apply for a common regulatory approval under the two Acts. This chapter will describe the regulatory landscape with a view to understanding some of the important factors that contribute to the failure of pollution regulation in India.

The environmental rights jurisprudence developed by the Indian judiciary over the last four decades has been instrumental in addressing cases of aggravated environmental pollution.¹⁵ But statutory mechanisms to regulate pollution, and not the rights-based judicial route, are the focus of the present discussion. The chapter also does not discuss issues relating to competing claims on water and the (unclear) regulatory regime governing the extraction and use of groundwater and surface water based on common law and state laws.

Section I analyses the framework of pollution regulation in India. It will examine the role of the main statutory environmental regulators, ie, the Pollution Control Boards, in implementing the Water Act and the Air Act, and the regulatory tools available to them to perform their statutory mandate. Section II analyses the tools for the enforcement of pollution regulation, both administrative and judicial.

¹⁴The Water (Prevention and Control of Pollution) Cess Act, 1977 is often discussed in the context of the pollution regulation in India, but is not dealt with here. It was repealed by s 18 of the Taxation Laws (Amendment Act) 2017. For four decades, water cess was an important source of funding for the Pollution Control Boards.

¹⁵See Lovleen Bhullar, 'The Judiciary and the Right to Environment in India: Past, Present and Future' in Shibani Ghosh (ed), *Indian Environmental Law: Key Concepts and Principles* (Orient Black Swan, forthcoming); Michael R Anderson, 'Individual Rights to Environmental Protection in India' in Alan Boyle and Michael R Anderson (eds), *Human Rights Approaches to Environmental Protection* (Clarendon Press, 1998) 199; Lavanya Rajamani, 'The Right to Environmental Protection in India: Many a Slip between the Cup and the Lip?' (2007) 16(3) *Review of European Community and International Environmental Law* 274.

Section III identifies some critical issues affecting the efficacy of the pollution regulation in India. This will be followed by a concluding section which proposes a way forward.

I. THE FRAMEWORK OF POLLUTION REGULATION IN INDIA: KEY ELEMENTS

Regulatory processes prescribed in the Water Act and the Air Act form the framework of water and air pollution regulation in India. This framework is complemented by processes and actions under other legislation such as the Environment (Protection) Act, 1986 (hereinafter the EP Act). This section will answer the following questions: (1) who are the principal regulatory actors and what are their functions; (2) who are the regulated entities; and (3) what are the tools for regulation employed?

A. Regulatory Actors and Their Functions

The key regulatory actors in the pollution regulation regime in India are the Central Pollution Control Board (CPCB) and the State Pollution Control Boards (SPCBs). When the Water Act was passed in 1974, it empowered the Central Government and the state governments to constitute the Central and State Water Pollution Prevention Boards to implement the provisions of the Act.¹⁶ In 1981, the Air Act enlarged the mandate of these agencies to include powers and functions arising from it, and they were subsequently renamed as the Central Pollution Control Board and the State Pollution Control Boards. In the Union Territories, the CPCB exercises the SPCB's powers,¹⁷ and over time these powers have been delegated to specially constituted Union Territory Pollution Control Committees.¹⁸ Besides the Water Act and the Air Act, the Boards presently hold an extensive mandate under a large number of other environmental regulations.¹⁹

i. Composition

The CPCB and the SPCBs are similar in composition. They are multi-member Boards consisting of a maximum of 15 members, serving part time, along with a chairperson and a member secretary, with a maximum of five officials being nominated to represent the Central Government (in the CPCB) or the state government (in the SPCBs); a maximum of five persons nominated from amongst the members of State Boards

¹⁶ Water Act, ss 3 and 4.

¹⁷ *ibid* s 4(4); Air Act, s 6.

¹⁸ For notifications on the delegation of powers, see www.moef.nic.in/division/water-pollution.

¹⁹ For example, the Boards play an important role under the Noise Pollution (Regulation & Control) Rules, 2000, the Environmental Impact Assessment (EIA) Notification, 2006, the Solid Waste Management Rules, 2016 and the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

(for the CPCB) or the local authorities functioning within the states (for the SPCBs), a maximum of three non-officials to represent the various interests of agriculture, fishery, industry, trade or any other interest which in the opinion of the Central Government or the state government ought to be represented, and two persons to represent companies owned, controlled or managed by the Central Government or the state government.²⁰ Interestingly, there is no requirement for the representation of civil society groups, academics, researchers or community leaders. Members hold their post for a period of three years, after which they may be renominated.

ii. Qualifications

Under both Acts, the chairperson of the Boards must have ‘special knowledge or practical experience in respect of matters relating to environmental protection’.²¹ But under the Water Act, there is an alternate eligibility criterion for the chairperson which was not included under the Air Act, viz a person with knowledge and experience in administering institutions dealing with matters relating to environmental protection.²² While the Chairperson of the CPCB is a full-time position, that of the SPCB may be a part-time one depending on the state government.²³ Member secretaries are required to possess ‘qualification, knowledge and experience of scientific, engineering or management aspects of pollution control’, and must be engaged on a full-time basis.²⁴ The two laws do not elaborate further on the qualifications of the chairperson and member secretary. They also do not lay down qualifications for other Board members; except under the Air Act, not less than two members of the Boards must have special knowledge or practical experience in matters relating to the improvement of quality of air.²⁵ The Central Government and the state government possess the rule-making powers to decide the terms and conditions of service of chairpersons, member secretaries and other members.²⁶

iii. Functions

The functions of the Boards include advising the Central Government and the state government on matters concerning prevention, control or abatement of air and water pollution, planning and executing programmes for the prevention, control or abatement of pollution, and laying down standards for emissions, effluents and pollution control processes.²⁷ Although many of their functions are similar, the CPCB’s role is

²⁰ Water Act, ss 3(2) and 4(2); Air Act, s 5(2). By the time the Air Act came into force, the CPCB had already been constituted. However, some states were yet to constitute the SPCBs. For such states, the Air Act laid down a similar composition of the Board, but with two important differences with regard to qualifications.

²¹ Water Act, s 4(2)(a); Air Act, s 5(2)(a).

²² Water Act, s 4(2)(a).

²³ *ibid* ss 3(2)(a) and 4(2)(a), proviso; Air Act, s 5(2)(a), proviso.

²⁴ Water Act, s 4(2)(f); Air Act, s 5(2)(f).

²⁵ Air Act, s 5(2), proviso.

²⁶ Water Act, s 63(2)(e); Air Act, s 54(2)(a), (aa) and (f).

²⁷ Water Act, ss 16 and 17; Air Act, ss 16 and 17.

more in the nature of a scientific and technical advisory body that collects, analyses and disseminates data on pollution control measures, while the SPCBs are invested with duties of regulatory oversight and enforcement.

The Boards meet periodically to take major decisions.²⁸ Daily functions are discharged by officers and employees appointed by the Central Government and the state governments to administrative, scientific, technical and legal posts.²⁹ SPCBs can also form smaller committees, such as the Consent Committee and the Standards Committee, to perform some of their tasks.³⁰ The Boards, along with their officers and employees, are under the direct supervision and control of their constituting governments, and are therefore accountable to them.³¹ Additionally, SPCBs are also bound by directions given by the CPCB.³²

iv. Funding

The Boards are body corporates³³ and are funded primarily by grants-in-aid from the Central Government and the state government, along with fees or charges received (such as for consent application fees under the Water Act and the Air Act). Until recently, the water cess collected under the Water Cess Act also formed part of the Boards' funding.³⁴

B. The Scope of Regulation and Regulated Entities

The Water Act applies to entire states, unless the state government limits its application to notified areas.³⁵ The Air Act, on the other hand, applies only to identified 'air pollution control areas' notified by the state governments.³⁶ In reality, both laws apply across entire states, as state governments have not limited the application of the Water Act, and under the Air Act, the entire territory of states have been declared as air pollution control areas. State governments also have the power under the Air Act to apply different standards for fuel, appliances etc in different parts of the state to address specific causes of air pollution.³⁷

²⁸ The law requires the Boards to meet at least once every three months, but the actual number of meetings varies across Boards. See Water Act, s 8; Air Act, s 10.

²⁹ Water Act, s 12(3); Air Act, s 14(3).

³⁰ Water Act, s 9; Air Act, s 11.

³¹ It is interesting to note that unlike Independent Regulatory Authorities set up in post-liberalisation India (many of which are analysed in other chapters of this volume), the Pollution Control Boards function very much within the control and supervision of the Central/state government.

³² Water Act, s 18(1)(b); Air Act, s 18(1)(b).

³³ Water Act, ss 3(3), 4(3), 34 and 35; Air Act, ss 5(3) and 32.

³⁴ The cess amount would be deposited by the state government with the Central Government, which would then disburse 80 per cent of the amount collected back to each state, while the remaining 20 per cent would be allocated to the CPCB.

³⁵ Water Act, s 19.

³⁶ Air Act, s 19(1).

³⁷ *ibid* s 19(3)–(5).

Definitions of key terms, such as pollution, air pollutant, emissions, sewage effluent, stream and trade effluent, under the two Acts are very broad³⁸ and potentially allow the Boards, and the governments, to comprehensively address water and air pollution. Further, certain provisions indicate the intention of the legislature to cast a wide net, as it were, for polluters. For instance, the Water Act prohibits all persons from knowingly causing or permitting any poisonous, noxious or polluting matter to enter any stream or on land.³⁹ Similarly, under the Air Act, the SPCBs can seek a restraining order from a court against any person, either operating an industrial plant or otherwise, who is likely to emit air pollutants in excess of the prescribed standards.⁴⁰

However, the categories of regulated entities that have to obtain prior approvals, or 'consents', from the SPCB before establishment (ie, Consent to Establish (CTE)) and then before commencing operations (ie Consent to Operate (CTO)), are different under the two laws.⁴¹ Under the Water Act, any person establishing an industry, operation or process, or any treatment and disposal system, or an extension thereto which is likely to discharge sewage or trade effluent, bringing into use any new or altered sewage outlets or making any new discharge of sewage has to first obtain these consents,⁴² while under the Air Act, only industrial plants need to obtain these consents.⁴³ An industrial plant has been defined as a plant used for any industrial or trade purposes and emitting any air pollutant.⁴⁴

Standards for vehicular emissions are proposed and decided by intergovernmental committees (with the participation of industry groups) headed by the Joint Secretary of the Ministry of Road Transport and Highways (MoRTH).⁴⁵ The Boards have a limited role to play with regard to vehicular emissions, other than laying down standards for emissions from vehicles.⁴⁶

C. Tools for Regulation

There are primarily two regulatory tools employed by the Boards under the two Acts: (1) prescribing standards; and (2) the consent mechanism.

i. Prescribing Standards

The power to lay down standards is with the CPCB as well as the SPCBs under the two Acts. These include standards for quality of air,⁴⁷ for emissions of air pollutants from industrial plants and automobiles, or for emissions of air pollutants from

³⁸ See Water Act, s 2; Air Act, s 2.

³⁹ Water Act, s 24(1).

⁴⁰ Air Act, s 22A.

⁴¹ See *Delhi Pollution Control Committee v Splendor Landbase Ltd* 2012 SCC OnLine Del 400, para 28.

⁴² Water Act, s 25(1).

⁴³ Air Act, s 21(1).

⁴⁴ *Nitin Majumdar v State of Karnataka* 2007 SCC OnLine Kar 187, paras 8 and 9.

⁴⁵ See Gaurav Bansal and Anup Bandivadekar, *Overview of India's Vehicle Emissions Control Program: Past Successes and Future Prospects* (International Council on Clean Transportation, 2013) 35.

⁴⁶ Air Act, s 20.

⁴⁷ *ibid* s 16(2)(h). Exercising this power, the CPCB issued the National Ambient Air Quality Standards (NAAQS) in 2009. See Notification dated 18 November 2009, www.mocf.nic.in/sites/default/files/notification/Recved%20national.pdf.

any source other than a ship or aircraft,⁴⁸ standards for a stream or well,⁴⁹ effluent standards for the sewage and trade effluents and for the quality of receiving waters resulting from the discharge,⁵⁰ and standards for treatment of sewage and trade effluents.⁵¹ The Boards can prescribe new or revised standards, prohibit or regulate certain types of polluting activities, customise standards based on the tolerance of the receiving water body or airshed, and put in place plans and policies that can suitably respond to demands for environmental protection that are likely to arise in the future.

The Boards generally rely on emission and discharge standards prescribed by the Central Government for various industries, operations and processes in the Environment (Protection) Rules 1986 (hereinafter the EP Rules) issued under the EP Act.⁵² For instance, the National Ambient Air Quality Standards 2009 (NAAQS) form Schedule VII of the EP Rules, and the EP Rules state that the combined effect of all industries, operations, processes, automobiles etc should not be permitted to exceed these standards.⁵³ However, the Boards may adopt more stringent standards than those prescribed in the EP Rules for a specific entity, depending upon the quality of the receptor (eg, a stream where the effluents will be discharged or the local airshed).⁵⁴

ii. The Consent Mechanism

The consent mechanism requires regulated entities to obtain a CTE and a CTO from the Boards. These consent orders mandate that the regulated entity meets certain technical specifications in its operations and processes, and ensure that it does not discharge effluents or emissions in excess of the prescribed standards. Once an application is filed, the SPCB can undertake such inquiry as it may deem fit.⁵⁵ This could include a site inspection. However, there is no statutory requirement to conduct a public consultation with potentially affected persons as part of the consent granting process.

A CTO has to be renewed regularly. The periodicity of the renewal as well as the stringency with which a consent application is reviewed depends mainly on the categorisation of the industry as a Red, Orange or Green industry.⁵⁶ Recently, a fourth category of industries was created – the White category – which includes 36 ‘non-polluting’ industries that do not need to apply for consents.⁵⁷ The SPCBs have the power to amend the conditions in a consent, cancel the consent before its expiry or refuse its renewal – after giving an opportunity to be heard to the regulated entity.⁵⁸

⁴⁸ Air Act, s 17(1)(g).

⁴⁹ Water Act, s 16(2)(g).

⁵⁰ *ibid* s 17(1)(g).

⁵¹ *ibid* s 17(1)(k).

⁵² EP Rules, scheds I–VII. See also EP Rules, r 3(3A).

⁵³ EP Rules, r 3(3B).

⁵⁴ *ibid* r 3(2).

⁵⁵ Water Act, s 25(3); Air Act, s 21(3).

⁵⁶ CPCB, *Document on Revised Classification of Industrial Sectors under Red, Orange, Green and White Categories* (CPCB, 2016), http://envfor.nic.in/sites/default/files/Latest_118_Final_Directions.pdf.

⁵⁷ *ibid*.

⁵⁸ Water Act, s 25(4); Air Act, s 21(4).

Once consent is granted, SPCBs are expected to monitor compliance of the conditions set therein, along with other legal requirements, and regulated entities have to submit annual environmental statements to the SPCBs.⁵⁹ An integral part of the monitoring process are inspections carried out by the SPCBs, and the collection and testing of samples at recognised laboratories. For this purpose, SPCBs prepare inspection protocols indicating the periodicity of inspection (differentiated according to the category and size of the industry), the method of selection of industry to be inspected, the process for sample collection etc.⁶⁰

Although the consent mechanism is similar under the two Acts, there are certain differences. Significantly, the Water Act contains a provision wherein if the SPCB does not decide on a consent application within four months of receiving it, the application is deemed to have been granted unconditionally.⁶¹ Such a deeming provision does not exist in the Air Act.⁶² Furthermore under the Water Act (and unlike the Air Act), if a regulated entity is operating without a consent, the SPCB has to first serve a notice on such an entity imposing such conditions as would have been imposed on it if it had filed an application.⁶³

The Acts provide a statutory mechanism – Appellate Authorities – for aggrieved persons to appeal against the orders of the SPCBs.⁶⁴ State governments are required to appoint Appellate Authorities in each state, composed of one or three members.⁶⁵ The qualifications of persons who may be appointed is not specified in the Acts, although in a 1999 judgment, the Supreme Court issued certain directions in this regard.⁶⁶ However, a recent study shows that in some states, the Appellate Authorities are not functional, and their composition and functioning in many other states does not inspire much confidence.⁶⁷

This section has provided an overview of the Boards, as well as the two mechanisms by which they regulate water and air pollution. What is of particular significance is that the two Acts give the Boards comprehensive powers to deal with increasing sources of pollution and types of pollutants, and to create new ways of remediating polluted environs. The next section discusses the mechanisms available to enforce the provisions of the Water Act and Air Act.

⁵⁹ EP Rules, r 14.

⁶⁰ See, for example, Inspection Policy of the Karnataka SPCB, http://kspcb.gov.in/OM_7158.pdf; and the procedure followed by the Maharashtra SPCB, www.mpcb.gov.in/consentmgmt/pdf/Circular_SamplingprocedurethroughSoftare20062015%20%20.pdf.

⁶¹ Water Act, s 25(7). See also *Som Distilleries and Breweries Ltd v State of Madhya Pradesh* MANU/MP/0509/1994.

⁶² See *Proprietor, Sulaimaniya Bone Mill v Tamil Nadu Pollution Control Board* MANU/TN/0232/2011.

⁶³ Water Act, s 25(5).

⁶⁴ *ibid* s 28, Air Act, s 31. 'Aggrieved person' is not defined in the two Acts. However, the courts have held that it includes not only regulated entities, but also those likely to be affected by the functioning of such entities. See *District Collector, Nellai Kattabomman Dist, Tirunelveli and Another v The Rajapalayam Cement and Chemicals Ltd* 1997 Writ LR 157; *Gujarat Pollution Control Board v Parmar Devusinh Shersinh* 2000 SCC OnLine Guj 132.

⁶⁵ Water Act, s 28(2); Air Act, s 31(2).

⁶⁶ *AP Pollution Control Board v Prof MV Nayudu* (1999) 2 SCC 718.

⁶⁷ Shibani Ghosh, Sharachchandra Lele and Nakul Heble, 'Appellate Authorities under Pollution Control Laws: Powers, Problems and Potential' (2018) 14(1) *Law Environment and Development Journal* 47.

II. THE ENFORCEMENT OF POLLUTION REGULATION IN INDIA

The Water Act and the Air Act equip the Boards with various administrative instruments for the enforcement of pollution standards. Apart from these instruments, the Boards as well as affected – and concerned – persons can also approach appropriate judicial forums for the enforcement of pollution regulations and grievance redressal. This section provides an overview of these instruments and judicial forums.

A. Administrative Instruments

i. Directions by Boards to Regulated Entities

Initially the Water Act and the Air Acts only provided for criminal prosecution as the mechanism for enforcement. However, both Acts were amended in the late 1980s to give the Boards the power to issue directions, and persons to whom such directions are issued are bound to comply with them.⁶⁸ These include directions for closure, prohibition or regulation of any industry, operation or process, or stoppage or regulation of the supply of electricity, water or any other service.⁶⁹ Directions under these provisions are typically preceded by show cause notices from the SPCB to the regulated entities. Boards do not need the approval of an external agency (like the courts) to exercise this power. However, the successful implementation of these directions often requires interagency coordination between the SPCB, the electricity and water supply boards, and local administration. As this power to give directions is quite generally worded, Boards can invoke it in a variety of situations: if a person is violating the terms of a consent, is operating without a consent or is not complying with any other statutory requirement. However, the power cannot be invoked to grant compensation or impose a penalty.⁷⁰ Failure to comply with the directions could lead to criminal prosecution.⁷¹

ii. Directions by CPCB to SPCBs

The two Acts also empower the CPCB to give certain directions to the SPCBs in the performance of its functions.⁷² These directions could, in turn, require the SPCBs to issue further directions to regulated entities within their states.⁷³ The CPCB has

⁶⁸ Water Act, s 33A; Air Act, s 31A.

⁶⁹ Water Act, s 33A, explanation; Air Act, s 31A, explanation. While discussing the ambit of closure directions, the High Court of Delhi in *Gopi Nath Pvt Ltd v Department of Environment Govt of NCT of Delhi* (1998) 72 DLT 536 held: 'Closing down all industrial activity is neither the purpose nor the object of the Act. Prevention of pollution is. If one particular component is the cause of pollution, the Board may well, subject to the provisions of the Act, direct its closure but it cannot seal the entire unit bringing thereby even unoffending activities to a standstill.'

⁷⁰ *Delhi Pollution Control Committee v Splendor Landbase Ltd* 2012 SCC OnLine Del 400.

⁷¹ Water Act, s 41(2); Air Act, s 37(1).

⁷² Water Act, s 18(1)(b); Air Act, s 18(1)(b).

⁷³ Water Act, s 33A; Air Act, s 31A.

exercised this power in many cases: for example, for the introduction of compulsory continuous emissions monitoring systems (CEMS) for 17 categories of highly polluting industries across the country;⁷⁴ imposing additional self-monitoring requirements on all red category industries in the National Capital Region (NCR) as a measure to improve air quality in the Region;⁷⁵ and bringing to the SPCB's attention specific statutory violations in its jurisdiction, directing it to take necessary action against the concerned regulated entities.⁷⁶

As the CPCB's power to give directions is broadly worded and its functions include coordination of the SPCBs' activities, resolving disputes amongst them and implementing nationwide programmes for the prevention and control of pollution,⁷⁷ the CPCB is well placed to initiate and support programmes that are based on the sources, and receptors of pollution, rather than the geographical boundaries of states. For instance, the NCR has in recent years witnessed a sharp rise in air pollution. The affected areas form part of the same airshed, and the nature of sources is such that they can be tackled more effectively if a coordinated approach is taken by various states, with support from the centre. The Air Act suitably empowers the CPCB and the Central Government to resolve (most) jurisdictional conflicts which may arise.

iii. Directions by the CPCB to Regulated Entities

Like the Boards, the Central Government, in the performance of its functions under the EP Act, has the power to give directions to any person, and any such person is bound to comply with such a direction.⁷⁸ It has delegated the power to issue directions to any industry, municipal corporation or authority for violations of the effluent and emissions standards laid down in the EP Rules to the CPCB.⁷⁹ The CPCB exercises this delegated power to issue a variety of orders including closure orders and show cause notices against regulated entities, and to revoke closure orders.⁸⁰ However, it cannot take punitive action against defaulting units under the provision.⁸¹

iv. Other Instruments

SPCBs can reject applications for renewal of consents or withdraw valid consents if the regulated entity is found to be violating the conditions of the consent.⁸²

⁷⁴Letter to all SPCBs/PCCs dated 5 February 2014, <http://cpcb.nic.in/displaypdf.php?id=Q1BBL0JfRGLyLnBkZg==>.

⁷⁵Letter to SPCBs/PCC of Delhi, UP, Rajasthan and Haryana dated 29 December 2017, <http://cpcb.nic.in/openpdffile.php?id=UHVibGljYXRpb25GaWxlLzEzMjZfMTUxNzI5NzIxMV9tZWRpYXBob3RvMjE0NTQuMDE=>.

⁷⁶For directions issued by the CPCB under s 18(1)(b) of the Water Act and the Air Act, see <http://cpcb.nic.in/cpcb-directions.php>.

⁷⁷Water Act, s 16(2); Air Act, s 16(2).

⁷⁸EP Act, s 5.

⁷⁹*ibid* s 23.

⁸⁰For Directions issued by the CPCB under s 5 of the EP Act, see <http://cpcb.nic.in/cpcb-directions-Sep.php>.

⁸¹*M/s Champ Energy Ventures Pvt Ltd v MoEFCC and Others* 2015 SCC OnLine NGT 83.

⁸²Water Act, s 27; Air Act, s 21(4), proviso.

Another mechanism that is increasingly being used by SPCBs to enforce compliance with statutory requirements is requiring regulated entities to deposit bank guarantees or performance security at the time of application for a CTE, or as a condition when allowing a regulated entity to continue functioning after a show cause notice is issued for some violation. This mechanism does not find a specific mention in the two Acts, but as a non-punitive condition has been found to be legal by the National Green Tribunal (NGT).⁸³ The guarantee amount is calculated by the SPCB based on the industry category and the investment/cost of the project. In the event of non-compliance with the conditions, the SPCBs encash full or part of the bank guarantee proportionate to the extent of the non-compliance.⁸⁴ Efforts have also been made to introduce an emissions trading scheme for particulate matter in certain industrial clusters in place of the conventional standards-based regulation under the Air Act.⁸⁵ However, the scheme has yet to come into force.

B. Judicial Forums

i. Criminal Courts

Violations of certain provisions in the two Acts constitute criminal offences, and the Acts prescribe imprisonment and fine as the punishment – the duration and amount varying depending on the offence.⁸⁶ Non-compliance with the conditions set out in the CTE or the CTO (eg, for polluting beyond permissible standards), knowingly introducing pollutants into the water, knowingly impeding the water flow which aggravates pollution, or failure to comply with directions issued by the Boards could lead to imprisonment of not less than one and a half years, which may extend up to six years, along with a fine. If the offence continues, an additional punishment may be imposed.

The court of competent jurisdiction under these Acts is the Metropolitan Magistrate or the Judicial Magistrate First Class. The prosecution may be initiated by the SPCB or by any person authorised by it, or by any other person, after serving necessary notice of his or her intention to approach the court to the Board.⁸⁷ The Boards can also approach the competent court for a restraining order against an entity which is likely to cause pollution in excess of the prescribed standards.⁸⁸

⁸³ *State Pollution Control Board, Odisha v M/s Swastik Ispat Pvt Ltd and Others* 2014 SCC OnLine NGT 13; *Tarun Patel v Chairman, Gujarat Pollution Control Board* 2014 SCC OnLine NGT 1383.

⁸⁴ See the Maharashtra SPCB's Enforcement Policy dated 29 February 2016, available at http://mpcb.gov.in/consentmgt/pdf/Circular_Enforcement_Policy.pdf; Office order dated 22 February 2012 issued by the Rajasthan SPCB, available at <https://www.pmar.in/asso/cir62.pdf>.

⁸⁵ Esther Duflo et al, 'Towards an Emissions Trading Scheme for Air Pollutants in India: A Concept Note' (MoEF, 2010), available at <https://gpcb.gov.in/Images/moef-discussion.PDF>. See also Gujarat Pollution Control Board, 'Emissions Trading Scheme (Pilot Project)', available at <https://gpcb.gov.in/emissions-trading-scheme.htm>.

⁸⁶ Water Act, ss 41–48; Air Act, ss 37–41.

⁸⁷ Water Act, s 49; Air Act, s 43.

⁸⁸ Water Act, s 33; Air Act, s 22A.

ii. *Under the NGT Act*⁸⁹

Civil action against pollution and violations of the Water Act and the Air Act can be sought by approaching the NGT. The Tribunal has original jurisdiction over all civil cases raising a substantial question relating to the environment, including the enforcement of any legal right relating to the environment.⁹⁰ Such question must arise from the implementation of six laws listed in the Schedule to the NGT Act, which includes the Water Act and the Air Act. The NGT has appellate jurisdiction over orders issued by Appellate Authorities under the Water Act and the Air Act, as well as directions issued by the Boards under the Water Act, but not over directions issued under the Air Act.⁹¹

The Tribunal can order relief and compensation to victims of pollution, and can order restitution of damaged property and for the restoration of the area's environment.⁹² Compensation can be paid under heads mentioned in Schedule II to the NGT Act, which includes death, injury, loss of wages, medical expenses, expenses incurred by the government in providing relief, aid and rehabilitation to the affected persons etc.⁹³ The Act makes the person responsible for causing the damage to the environment (for example, the owner of a polluting factory) liable for paying the compensation as determined by the Tribunal.⁹⁴ In the case of an accident, the Tribunal has to apply the no-fault liability principle,⁹⁵ following the absolute liability principle laid down by the Supreme Court in the Oleum Gas leak case.⁹⁶ The Act also requires the Tribunal to apply the polluter pays, sustainable development and precautionary principles when deciding cases.⁹⁷

The Tribunal is empowered to issue interim orders including injunctions or stays, and orders requiring persons to cease and desist from committing or causing any harm to the environment.⁹⁸ An order of the Tribunal can be appealed in the Supreme Court.⁹⁹

The Tribunal has used its powers to issue a variety of orders to tackle different types of water and air pollution. It has issued closure orders to polluting industries,¹⁰⁰ directed polluting industries to install treatment facilities,¹⁰¹ and ordered municipal corporations and industries responsible for polluting river water to pay environmental compensation and undertake remediation measures.¹⁰²

⁸⁹ This section builds on Shibani Ghosh, 'Reforming the Liability Regime for Air Pollution in India' (2015) IV *Environmental Law and Practice Review* 125.

⁹⁰ NGT Act, s 14(1) read with s 2(1)(m).

⁹¹ NGT Act, s 16.

⁹² *ibid* s 15.

⁹³ *ibid* sched II.

⁹⁴ NGT Act, s.17.

⁹⁵ *ibid* s 17(3).

⁹⁶ *MC Mehta v Union of India* (1987) 1 SCC 395.

⁹⁷ NGT Act, s 20.

⁹⁸ *ibid* s 19(3).

⁹⁹ *ibid* s 22.

¹⁰⁰ See, for example, *MC Mehta v Union of India*, OA No. 200/2014, Order dated 26 April 2017.

¹⁰¹ See, for example, *M/s Laxmi Suiting and Others v State of Rajasthan, through the Secretary and Others* MANU/GT/0042/2014.

¹⁰² See, for example, *Vanashakti Public Trust and Another v Maharashtra Pollution Control Board and Others*, OA 37/2013(WZ), Judgment dated 2 July 2015; *Krishan Kant Singh v M/s Triveni Engg Industries*

In the context of rising air pollution in the NCR, the Tribunal has directed that diesel vehicles older than 10 years and petrol vehicles older than 15 years not be registered in the NCR,¹⁰³ and has issued detailed orders to reduce pollution caused from construction activities¹⁰⁴ and crop burning.¹⁰⁵ In November 2017, when Delhi experienced hazardous air quality, the Tribunal banned construction, industrial activities and the entry of trucks into the city.¹⁰⁶ To reduce air pollution in the Rohtang Pass region of Himachal Pradesh, the Tribunal has issued several orders, including restricting the number of vehicles going to the Pass per day and directing the payment of a fee for environmental compensation by each vehicle.¹⁰⁷

iii. Proceedings before the Supreme Court

The Supreme Court of India has often been complimented for its green credentials and for its active role in protecting the environment. Some of its landmark environmental judgments have been delivered in cases concerning widespread water and air pollution. In such cases, the Court has relied on both a rights-based justification and on existing statutory provisions, often highlighting the executive's laxity in implementing the law.

The Supreme Court's orders and judgments addressing aggravated levels of pollution in the Ganga,¹⁰⁸ directing remediation of the environment in Bichhri village Rajasthan and sealing the polluting 'rogue industries',¹⁰⁹ and regulating the leather industry in Vellore while directing the payment of compensation to those affected by the industry's illegal actions¹¹⁰ are some of its significant judgments on water pollution.

Similarly, on the issue of air pollution, the Supreme Court has played an important role – particularly in the NCR. In 2002, it directed the public transport fleet running in Delhi to move from diesel to compressed natural gas, which was then considered less harmful.¹¹¹ Over the years, it has directed concerned authorities to construct expressways around Delhi so that the traffic destined elsewhere can bypass the city, directed the introduction of an environmental compensation cess to be paid by heavy vehicles which pass through Delhi,¹¹² and imposed strict regulation on the use of

Ltd, OA 317/2014, Judgment dated 10 December 2015; *The Forward Foundation and Others v State of Karnataka and Others*, OA 222/2014, Judgment dated 7 May 2015.

¹⁰³ *Vardhaman Kaushik v Union of India*, OA No 21/2014, Order dated 7 April 2015.

¹⁰⁴ *ibid*, Order dated 4 December 2014.

¹⁰⁵ *Vikrant Kumar Tongad v Environment Pollution (Prevention & Control) Authority and Others*, OA 118/2013, Judgment dated 10 December 2015.

¹⁰⁶ *Vardhaman Kaushik* (n 103) Order dated 9 November 2017.

¹⁰⁷ *Court on its Own Motion v State of Himachal Pradesh*, OA No 237 (THC)/2015. See in particular Orders dated 6 February 2014 and 5 May 2015.

¹⁰⁸ *MC Mehta v Union of India* (1987) 4 SCC 463; *MC Mehta v Union of India* (1997) 2 SCC 411; and *MC Mehta v Union of India* (1988) 1 SCC 471.

¹⁰⁹ *Indian Council for Enviro-Legal Action v Union of India* (1996) 5 SCC 212.

¹¹⁰ *Vellore Citizens' Welfare Forum v Union of India* (1996) 5 SCC 647.

¹¹¹ *MC Mehta v Union of India* (2002) 4 SCC 356.

¹¹² *MC Mehta v Union of India* (2016) 2 SCC 33.

pet coke and furnace oil.¹¹³ In another case on air pollution in Delhi and surrounding areas, the Court issued a temporary ban on the bursting of firecrackers during Diwali.¹¹⁴

iv. Under General Criminal and Civil Law

Apart from the criminal proceedings under the Water Act and the Air Act, legal proceedings may also be initiated under general laws.¹¹⁵ Actions causing water or air pollution could potentially be brought within the definitional ambit of ‘public nuisance’ in the Indian Penal Code.¹¹⁶ Further, under the Code, polluting water (‘fouling water’) and air (‘vitiates the atmosphere’) are specific offences.¹¹⁷ Action can also be taken by a magistrate under the Criminal Procedure Code to remove any cause of ‘nuisance’.¹¹⁸ This could include ordering the closure of any trade which is injurious to health or physical comfort, the removal of unlawful obstruction in a river or channel, or stopping the disposal of any substance that may conflagrate or explode.¹¹⁹

The enforcement of pollution regulation can also be pursued through an action against public nuisance under the Code of Civil Procedure 1908 or, as in any other civil suit, an order for declaration, injunction or any other appropriate remedy may be sought. Persons filing a suit against public nuisance need not prove that special damage has been caused to them.¹²⁰

This section has reviewed the administrative instruments available to the Boards to enforce the provisions of the two Acts. It has also provided an overview of the judicial forums where cases relating to the enforcement of the Water Act and the Air Act can be adjudicated. From the array of options available to the Boards – both administrative and judicial – it would seem that the Boards have a reasonably heavy regulatory tool chest at their disposal and they could, depending on the severity of the violation or default, select one amongst many tools, viz issue a show cause notice, a closure order, a direction to desist certain polluting operations, or directions to install pollution abatement equipment, demand/forfeit a bank guarantee, withdraw

¹¹³ *MC Mehta v Union of India* 2017 SCC OnLine SC 1378.

¹¹⁴ *Arjun Gopal v Union of India* 2017 SCC OnLine SC 1203.

¹¹⁵ The Supreme Court in *State of Madhya Pradesh v Kedia Leather & Liquor Ltd* (2003) 7 SCC 389 has clarified that the two procedures under the general law (Code of Criminal Procedure 1973) and under the special law (the Water Act) operate independently of each other, and the latter has not repealed the former.

¹¹⁶ IPC, s 268.

¹¹⁷ *ibid* ss 277 and 278.

¹¹⁸ Code of Criminal Procedure 1973, s 133.

¹¹⁹ The Supreme Court in *Kachrual Bhagirath Agrawal v State of Maharashtra* (2005) 9 SCC 36 upheld an order under s 133 stopping the storing and transportation of dry chilies from a godown as it was held to be a public nuisance causing pollution and physical discomfort to persons residing nearby. The Court held: ‘The guns of Section 133 go into action wherever there is public nuisance. The public power of the Magistrate under the Code is a public duty to the members of the public who are victims of the nuisance, and so he shall exercise it when the jurisdictional facts are present ... The conduct of the trade must be injurious in presenti [sic] to the health or physical comfort of the community. There must, at any rate, be an imminent danger to the health or the physical comfort of the community in the locality in which the trade or occupation is conducted’ (para 11).

¹²⁰ Code of Civil Procedure 1908, s 91.

consent, initiate criminal prosecution, seek an injunction, seek compensation etc. The only actions they cannot take are the imposition of a monetary penalty and reward compensation, but they can approach an appropriate judicial forum for such relief. In the next section I will explore some of the issues which impact the efficacy of pollution regulations in India and why the Boards, despite exercising wide jurisdiction and enjoying significant powers, are unable to utilise their regulatory tool chest to effectively regulate water and air pollution in the country.

III. CRITICAL ISSUES AFFECTING THE EFFICACY OF THE POLLUTION REGULATION

Despite an elaborate regulatory structure that has been in place for over four decades, a legal regime that could comprehensively address most causes of air and water pollution, regulators with a variety of enforcement tools at their disposal and a (usually) sympathetic judiciary, pollution regulation in India is failing. In this section, I discuss some of the critical issues that impact the efficacy of the pollution regulation regime.

A. The Institutional Capacity of Boards

The effective implementation of the Water Act and Air Act depends, in large part, on an effectively functioning Board supported by a competent and adequate staff. Over the years, several studies commissioned by the government, as well as some undertaken independently, reveal that the SPCBs do not have the capacity to perform the functions assigned to them under various environmental regulations. The lack of capacity in SPCBs is attributable to many factors: absence of technically competent leadership, inadequate sanctioned strength of personnel, high numbers of vacancies, absence of proper training for personnel, lack of pollution monitoring and abatement equipment etc.¹²¹ I will look at a few of these factors in greater detail.

The Boards play a critical role in pollution regulation, and therefore their leadership and membership must mirror their statutory mandate. This issue of who is competent to head the Boards was raised before the Supreme Court.¹²² The matter arose in an appeal against a judgment of the NGT, which directed all states to cancel the appointments of chairpersons and member secretaries of SPCBs that were not in accordance with the Water Act and the Air Act, and the Tribunal's interpretation

¹²¹ Geetanjoy Sahu, *Environmental Regulatory Authorities in India: An Assessment of State Pollution Control Boards* (TISS, 2013); Centre for Science and Environment, *Turnaround: Reform Agenda for India's Environmental Regulators* (CSE, 2009); Departmental Parliamentary Standing Committee on Science & Technology and Environment & Forests, *192nd Report on the Functioning of Central Pollution Control Board* (2008); OECD, *Environmental Compliance and Enforcement in India: Rapid Assessment* (OECD, 2006); Planning Commission, Government of India, *Evaluation Study on the Functioning of State Pollution Control Boards* (Government of India, 2002).

¹²² *Techi Tagi Tara v Rajendra Bhandari and Others* 2017 SCC OnLine SC 1165.

of the relevant provisions.¹²³ The Supreme Court set aside the Tribunal's judgment, holding that whether a person is qualified to be on the Board or not, and what should be the specific qualifications of candidates, was not within the Tribunal's jurisdiction to determine. However, the Supreme Court shared the Tribunal's deep anguish at the attitude of the state governments in appointing persons who were not adequately qualified to head expert bodies like the SPCBs. It observed:

One of the principal attributes of good governance is the establishment of viable institutions comprising professionally competent persons and the strengthening of such institutions so that the duties and responsibilities conferred on them are performed with dedication and sincerity in public interest. This is applicable not only to administrative bodies but more so to statutory authorities – more so, because statutory authorities are the creation of a law made by a competent legislature, representing the will of the people.

The Supreme Court further noted that 'many of [the SPCBs] possess only a few or sometimes none of the above attributes of good governance and again a few or none of them are adequately empowered'. It directed all states to formulate rules and guidelines for recruitment to the Boards in light of the institutional requirements, legal provisions and recommendations of various committees over the years within six months. The state governments' inability – or reluctance – to properly constitute the Boards risks, at best, mediocre environmental decision making and, at worst, undesirable and irreversible environmental outcomes.

Given the nature and extent of their duties under the two Acts, along with other environmental regulations, the Boards require significant staff strength – technical and administrative – in order to be able to perform their mandate. However, even the sanctioned strength across Boards falls short of their basic requirements. According to a 2010 CPCB report, there was an additional staff requirement of 6,658 persons across SPCBs, of which 3,650 were required for scientific/technical and computerisation activities. At that time, the sanctioned strength of the SPCBs was 8,406, with only 6,005 positions filled.¹²⁴ After eight years, with sources of pollution and types of pollutants increasing, this assessment of additional staff requirement can only be revised upwards.

Even assuming the sanctioned strength has been reasonably determined – although it is unclear how this determination is made – the high rate of vacancies aggravates the situation. The CPCB's latest Annual Report 2015–16 states that of its 535 sanctioned posts, 101 were vacant. In fact, the post of the Chairperson of the CPCB was vacant for four and a half years before the current chairperson was appointed.¹²⁵ In performance audits conducted by the Comptroller and Auditor General of India (CAG), it

¹²³ *Rajendra Singh Bhandari v State of Uttarakhand and Others*, OA No 318/2013, Judgment dated 24 August 2016. See also Shibani Ghosh, 'National Green Tribunal Stops Chairpersons of 10 State Pollution Control Boards from Functioning', *Centre for Policy Research* (13 June 2017), www.cprindia.org/news/6236.

¹²⁴ See CPCB, 'Strengthening of Pollution Control Boards and Pollution Control Committees' (2010) (on file with the author).

¹²⁵ DNA, 'MoEF Appoints Full-Time CPCB Chairperson after Four years' DNA, 16 July 2016, www.dnaindia.com/india/report-moef-appoints-full-time-cpcb-chairperson-after-four-years-2234886.

was revealed that by the end of March 2017, in the Karnataka SPCB 51 per cent of posts and in the Rajasthan SPCB 34 per cent of posts were lying vacant.¹²⁶ Besides the vacancy problem, there is also the issue of many SPCBs employing a disproportionately high number of administrative staff with no technical expertise, who therefore cannot perform some of the core functions of the Boards.¹²⁷

The composition and functioning of the Board itself is an area of concern. The composition of the Board is dominated by government officials, and the Member Secretary is generally an Indian Administrative Services or Indian Forest Services officer who comes through deputation, and her tenure is not fixed. On the one hand, the government is not required to appoint representatives from civil society groups or research institutions working on environmental conservation and pollution control to the Board, while on the other hand, they have representatives who are potential polluters, such as municipal corporations and industries.¹²⁸ Boards do not meet regularly, even though they are meant to meet once every three months.¹²⁹ There is no clear evidence that this structure – a multi-member Board, where all members other than the Member Secretary are serving only part-time, that enjoys significant decision-making powers but is under the direct supervision of the state governments, and that is supported by a permanent staff with limited expertise, training and autonomy – has been a successful model. In fact, the state of India's environment should urge us to rethink this structure.

B. Standard Setting and Pollution Control Measures

While designing pollution regulations, two determinations need to be made at the outset: first, ascertaining what should be the quality of water and air for a particular use or in a particular area – in other words, what it is that we are trying to achieve through the regulatory regime; and, second, what are the appropriate standards of discharge/emissions, fuel, technology, process etc that are required to attain this quality?¹³⁰ Both these determinations have to be arrived at after rigorous scientific assessment and after considering factors like human and animal health, biodiversity conservation, relevant environmental conditions etc. The entire regulatory regime is then structured in a way that supports these two determinations.

¹²⁶ Report of the Comptroller and Auditor General of India on Economic Sector for the year ended March 2017, Government of Karnataka, Report No 8 of the year 2017; Report of the Comptroller and Auditor General of India on Economic Sector for the year ended 31 March 2017, Government of Rajasthan, Report No 5 of the year 2017.

¹²⁷ Sahu (n 121). See, eg, CAG, Performance Audit on Environmental Degradation in the greater Guwahati Area with special emphasis on the role of the Pollution Control Board, Assam, Report No 3 of 2016, 7.

¹²⁸ Sharachchandra Lele and Nakul Heble, 'Changes in Pollution Board Undermine Accountability' *Deccan Herald* (16 June 2016).

¹²⁹ The Supreme Court noted in *Techi Tagi Tara* that the Uttarakhand SPCB met 15 times in 12 years. The CAG Report on Rajasthan SPCB states that between 2012 and 2017, the Board met eight times, instead of the stipulated 20 times.

¹³⁰ I would like to thank Sharachchandra Lele for this point.

In India, these determinations are either not made or are not made scientifically. The standard-setting function of the Boards (and the Environment Ministry) receives little attention. In 2017, the Supreme Court in an order noted that emissions standards for SO_x and NO_x had not been set for 35 industries.¹³¹ Boards often do not maintain databases on even basic information about water bodies, number and type of pollution sources, pollutant load etc.¹³² In the absence of this kind of information, Boards are not in a position to prepare location specific standards and introduce targeted pollution control measures.

The NAAQS prescribe, inter alia, permissible levels of particulate matter 2.5 (in μm^3) for industrial and residential areas annually as 40 and for a 24-hour period as 60. The World Health Organization (WHO) sets limits for the same parameter at 10 and 25,¹³³ while the United States Environment Protection Agency has pegged these limits at 12 and 35.¹³⁴ It is not clear how the CPCB has determined these standards, which are multiple times higher than the WHO standards.

The consent mechanism is currently designed to meet source-specific standards – standards which by themselves may not be scientifically designed – and do not consider the capacity of the receptor (ie, the water body or the local airshed).¹³⁵ Even if 10 factories discharge effluents which meet the standards prescribed in their respective consents, the water quality in the receiving stream may not meet the necessary standards for any type of consumption. In the context of air pollution, according to the EP Rules, the cumulative effect of emissions from all sources in an area should not exceed the relevant concentrations as stipulated in the NAAQS.¹³⁶ For that reason, Boards should grant consents to only those regulated entities in an airshed whose combined effect does not exceed the NAAQS. But unfortunately, the regulatory structure does not prioritise such holistic environmental outcomes and instead (unsuccessfully) focuses on regulating point sources.

Between their two core regulatory functions – prescribing standards and consent management – most Boards spend considerably more time on the latter and, given the limited technical staff strength, the former suffers. Even with regard to consent management, the Boards spend more time granting and renewing consents, and much less time and resources monitoring compliance with conditions. The 2017 CAG report for the Karnataka SPCB found that there was a shortfall of 44 per cent in inspections of regulated entities, based on the frequency of inspections required according to the SPCB's inspection protocol.¹³⁷

¹³¹ *MC Mehta v Union of India* (2017) 14 SCC 494.

¹³² Report of the Comptroller and Auditor General of India, Performance Audit of Water Pollution in India, Report No 21 of 2011–12; Karnataka CAG Report (n 126) 41.

¹³³ World Health Organization, *WHO Air Quality Guidelines for Particulate Matter, Ozone, Nitrogen Dioxide and Sulfur Dioxide: Global Update 2005* (WHO, 2006) 9.

¹³⁴ United States Environment Protection Agency, *NAAQS Table*, <https://www.epa.gov/criteria-air-pollutants/naaqs-table>.

¹³⁵ See also Planning Commission of India, *Report of the Steering Committee on the Environment and Forests Sector for the Eleventh Five Year Plan (2007–2012)* (GoI, 2007) 47.

¹³⁶ EP Rules, r 3(3B).

¹³⁷ See also CAG Report on Rajasthan SPCB (n 126) 44.

Significantly, financial capacity is not necessarily a constraining factor. Annual reports and audit reports of several Boards show that the Boards do not spend the money allocated to them. More specifically, while funds under line items relating to personnel, which form a significant portion of the Boards' budget, are mostly spent, other line items like research projects and pollution control measures remain under-spent.¹³⁸ For instance, it was reported that in the last two years, the Maharashtra SPCB has not spent 80 per cent of the funds allocated to it for air, water and noise pollution control measures.¹³⁹

One of the main reasons for the failure of pollution regulations in India is that their goal is poorly defined. The goal is defined in terms of numbers of regulated entities rather than water bodies or airsheds with good quality usable water and breathable air. There is a myopic focus on consent management. Standard setting based on rigorous scientific assessment, and monitoring compliance with consent conditions, which ironically validates the consent granting process, are not a priority.

C. Issues with Enforcement

Despite an array of enforcement mechanisms to choose from, the implementation of pollution regulation in India is far from successful. A review of environmental cases before the higher judiciary reveals an abject failure of the regulatory agencies in exercising their own enforcement powers.¹⁴⁰

Evidently the enforcement mechanisms are either inadequate or the Boards are reluctant to employ them often enough. According to the National Crime Records Bureau (NCRB), in 2016, nine cases were sent for trial under the Water Act and 26 under the Air Act. Further, while six cases under the Water Act were decided (three convictions and three acquittals), under the Air Act, only a single case was adjudicated, which resulted in an acquittal.¹⁴¹ Even assuming under-reporting of cases and some methodological errors in data collection by the NCRB, these numbers indicate that criminal prosecution is not a chosen mechanism for Boards. This is also reflected in the data available from SPCBs. For instance, no cases were filed by the Gujarat SPCB in 2013–14¹⁴² and the Odisha SPCB in 2015–16,¹⁴³ and in 2013 the Chhattisgarh Environment Conservation Board filed only nine cases.¹⁴⁴

The reason is perhaps the resource-intensive nature of a criminal prosecution. A case goes through several appellate/revisional forums and each forum often takes a long time to conclude proceedings.¹⁴⁵ During the pendency of the case, unless an

¹³⁸ See for example, Performance Audit Assam SPCB (n 127) 6–7.

¹³⁹ Badri Chatterjee, 'Maharashtra Pollution Board High on Funds, Low on Staff, Equipment' *Hindustan Times* (27 June 2017).

¹⁴⁰ See, for example, *Ulhasnagar Municipal Corporation v Vanashakti Public Trust and Others* MANU/SCOR/42930/2017; *Indian Council for Enviro-Legal Action v Union of India* (1996) 5 SCC 281.

¹⁴¹ National Crimes Records Bureau, *Crime in India 2016: Statistics* (NCRB, 2017) 480.

¹⁴² Gujarat SPCB Annual Report 2014–2015.

¹⁴³ Odisha SPCB Annual Report 2015–2016.

¹⁴⁴ Chhattisgarh Environment Conservation Board, Administrative Report 2013–2014.

¹⁴⁵ See, for example, *Vikash Bansal v Delhi Pollution Control Committee*, Criminal Appeal No 112/17, Judgment dated 21 November 2017 (Tiz Hazari courts). See also *Uttar Pradesh Pollution Control Board v Mohan Meakins Ltd* (2000) 3 SCC 745.

injunction is specifically granted restraining the offending unit from continuing its operations, the unit may well continue to pollute. This long drawn-out legal battle is a strain on the SPCBs' limited resources, is certainly a disincentive for private citizens to initiate action and is hardly a cause for concern for the polluter, who is at minimal risk of conviction; therefore, it is not a very effective or timely way of enforcing environmental standards.¹⁴⁶

The power to issue directions is broadly worded and can be invoked by the Board in a large variety of situations. But before it can issue such directions, the SPCB has to mandatorily issue a show cause notice to the establishment and give the owner time to respond. This is particularly important in cases of closure directions or directions to stop the water or power supply, which may have other unintended adverse consequences, such as on the labour force.¹⁴⁷ Although this mechanism is preferred over the initiation of criminal prosecution, the period of notice and reply often extends indefinitely, frequently involving several notices and not necessarily ending in any action by the Boards against the defaulting entity. During that time, the pollution may well continue, and the entity is not required to remedy the situation or compensate those who may have been affected due to its negligent action. The fear of criminal prosecution is clearly not an effective deterrent.

Certain Boards prefer the forfeiture of bank guarantees or performance security as an enforcement mechanism, and it is certainly appealing as it does not require a protracted legal proceeding and collateral damage is minimal. However, the mechanism is meant to be compensatory and not punitive, and this gives rise to the following concern: the amount of bank guarantee sought and forfeited has to sufficiently compensate for the environmental damage caused. Assessing the damage caused, the necessary remedial action and then initiating such action is a complicated exercise requiring expertise and resources, and an ex ante calculation of the monetary amount, without an option for future adjustment, may not be adequate. Unless the amount is sufficiently high to deter future violations or there is a real fear of strict punitive action in the case of repeated defaults, the bank guarantee mechanism may turn into a 'pollute and pay' system.

At the same time, it is important to consider the existing design and institutional capacity of SPCBs. Closure of an industrial plant or imprisonment for an environmental offence are perhaps the most stringent actions that can be prescribed, but the likelihood of either happening is very low because the Boards do not have the capacity to, for instance, make airtight prosecution cases which increase the probability of a criminal prosecution. Neither do they have the staff strength that can routinely monitor regulated entities and take timely action against the defaulters.

Increasing the SPCBs' enforcement powers will be to no avail if their capacity and competence to exercise these powers is not enhanced. If the law is amended allowing SPCBs to impose monetary fines on polluting units, the SPCBs must have adequate

¹⁴⁶ See also Shibani Ghosh, 'When the Court Convicted a Person for Polluting the Environment' *The Wire* (3 January 2018).

¹⁴⁷ See, for example, PTI, 'Labourers Went without Pay during Construction Ban: Delhi Govt' *Indian Express* (25 November 2017).

trained personnel to conduct proper inspections, assess environmental damage and necessary remedial actions, and then calculate the appropriate fine. Additional enforcement powers, such as those to impose monetary fines, will only increase the extent of their discretion, and mechanisms ensuring transparency and accountability will be essential in order to limit abuse.

D. Transparency, Public Participation and Accountability

Pollution regulations potentially impact – directly or indirectly – the lives of a majority of the Indian population. In such a scenario, transparency in the functioning of the regulatory actors, access to information about their actions, decisions, policies and processes, and the opportunity to participate in some of the decision making processes and hold erring regulators to account is critical.

As discussed above, operating without a consent or in violation of consent conditions is a criminal offence and could give rise to civil liability. The grant of a consent is also appealable before the NGT. Therefore, whether the consent has been granted and on what grounds are important facts which could have serious legal consequences. Information contained in consents is relevant while assessing the environmental impact of a regulated entity and, if necessary, to challenge its operation, and violations committed by it, in an appropriate forum.

The Boards clearly fall within the definition of ‘public authority’ under the Right to Information Act, 2005,¹⁴⁸ and are therefore under a statutory obligation to either *suo moto* disclose certain categories of information such as minutes of Board meetings, details of persons who have been granted consents by it and copies of the consent orders. The official websites of most SPCBs do not contain all this information, and although information when sought under the Right to Information Act is supposed to be supplied within 30–35 days, this is often not the case, and the appellate process is time-consuming.

The Water Act and the Air Act require the maintenance of a register by the SPCBs, recording the particulars of persons to whom the consent has been granted, the standards of emission laid down in the consent and other information, and making it available to the public for inspection.¹⁴⁹ However, performance audits conducted by the CAG of SPCBs over the years reveal that registers containing consent information are not maintained in accordance with the law.¹⁵⁰

The application process and the conditions for the granting of consent require mandatory disclosure of certain categories of environmental impact information. Compliance with these consent conditions has to be disclosed in an annual

¹⁴⁸ RTI Act, s 2(h).

¹⁴⁹ Water Act, s 25(6); Air Act, s 51.

¹⁵⁰ For example, CAG Environment Audit Reports on Air Pollution, <http://iced.cag.gov.in/wp-content/uploads/2013/02/ARs-on-Air-pollution.pdf>; Audit Report (Civil and Commercial) for the year ended 31 March 2007 for Jharkhand; Report of the Comptroller and Auditor General of India on General and Social (non-PSUs) sectors for the year ended 31 March 2014, Government of Madhya Pradesh.

environmental statement to the concerned SPCB. The proportion of entities that submit annual environmental statements and what action SPCBs take based on the information submitted (or against non-submission) is unclear from publicly available information, and a summary review of the websites of some of the bigger SPCBs reveals that these annual statements are not accessible on their websites.

In terms of public participation in decision-making, the two Acts have very limited opportunities.¹⁵¹ The consent-granting process, as well as the standard-setting process,¹⁵² does not have a mandatory public consultation phase, unlike the environmental clearance process under the EIA Notification 2006. This is indeed deeply problematic as people have virtually no say in decisions, such as the siting of industrial plants or the renewal of consents of defaulting units in close proximity, which affect their lives and livelihoods.

Despite extensive powers and a broad mandate, Boards across India are underperforming. And while they undoubtedly suffer from a capacity crunch and there are internal (such as a lack of functional and financial autonomy) and external factors (such as overflowing dockets and protracted proceedings in courts) that influence their functioning, there are instances when the Boards and particular officials need to be held accountable for dereliction of duty, gross misconduct or even the abetment of crimes. In the *Bicchri* case, the Supreme Court suggested that:

The heads of several units and agencies should be made personally accountable for any lapses and/or negligence on the part of their units and agencies. The idea of an environmental audit by specialist bodies created on a permanent basis with power to inspect, check and take necessary action not only against erring industries but also against erring officers may be considered.¹⁵³

The High Court of Allahabad, faced with Uttar Pradesh SPCB officials colluding with brick kiln owners to illegally grant consents, emphasised the SPCB's role in protecting the environment and suggested that the Board's functioning should be screened by the Vigilance Department and other surveillance agencies.¹⁵⁴

Currently there is no mechanism in the Water Act or the Air Act to hold errant officials responsible for their actions or inactions. No legal proceedings can lie against an official in respect of anything done in good faith or intended to be done in pursuance of the Acts or Rules framed under them.¹⁵⁵ While there is no statutory mechanism, the courts do have the power to hold them accountable – through judicially reviewing their decisions¹⁵⁶ and/or imposing costs on government agencies for their illegal

¹⁵¹ CM Abraham and Armin Rosencranz, 'An Evaluation of Pollution Control Legislation in India' (1986) 11 *Columbia Journal of Environmental Law* 101.

¹⁵² See also Shripad Dharmadhikary, 'Setting Environmental Standards Comparing Processes in Thermal Power Plants in India, US, and EU' (2017) LII(19) *Economic and Political Weekly* 93.

¹⁵³ *Indian Council for Enviro-Legal Action v Union of India* (n 109).

¹⁵⁴ *Shiv Shanker Yadav and Others v State of UP* MANU/UP/2769/2013.

¹⁵⁵ Water Act, s 59; Air Act, s 42.

¹⁵⁶ The Supreme Court of India in *Lafarge Umiam Mining Pvt Ltd v Union of India and Others* (2011) 7 SCC 338 summarised the grounds for review in environmental cases as follows: 'In the circumstances, barring exceptions, decisions relating to utilization of natural resources have to be tested on the anvil of the well-recognized principles of judicial review. Have all the relevant factors been taken into account? Have any extraneous factors influenced the decision? Is the decision strictly in accordance with the legislative

actions. The Supreme Court imposed costs of Rs 2 lakhs on the Environment Ministry for not finalising emission standards for two industries that had been proposed by the CPCB in 2014.¹⁵⁷

The lackadaisical attitude of government officials in discharging their duties in not an uncommon occurrence in India, and therefore underperformance is not unique to the Boards. However, their neglect, inaction or condonation of illegal acts could lead to grave, and often irreversible, impacts on the environment and people's lives. Their accountability is necessary as the impunity they enjoy now contributes considerably to the failure of pollution regulation.

CONCLUSION

As a significant part of the Indian population suffers some form of pollution, and their quality of life is seriously threatened, India needs to urgently rethink its pollution regulation regime. The need for this reform has been expressed on several occasions by the public and the judiciary. In the recent past, several protests have taken place highlighting instances of widespread pollution and complete regulatory failure – for instance, against Vedanta's copper smelter plant in Thoothukudi, against Hindustan Unilever for mercury poisoning in Kodaikanal and against the spraying of endosulfan by the Plantation Corporation of Kerala. The judiciary in several cases has been dismayed by persistent regulatory inaction in tackling pollution. Even the government, as well as the committees constituted by it, has acknowledged the limitations faced in enforcing pollution norms.¹⁵⁸ Despite a clear demand for reform, comprehensive pollution regulation reform has not been undertaken.

Given how dysfunctional the regulatory system is, it is tempting to suggest a complete overhaul, repealing or amending the decades-old laws and setting up new institutions with structures and powers that respond to the nature and scale of the problem. Alternatively, it is also reasonable to consider the granting of additional powers to regulators so that they can perform their statutory tasks more effectively and achieve better environmental outcomes. But both of these sets of options are fairly radical. They require, at the very least, parliamentary action, and would also entail dismantling institutions with thousands of employees across several offices that have been functioning for decades, and which regulate a significant proportion of industries and other potentially polluting operations in the country.

policy underlying the law (if any) that governs the field? Is the decision consistent with the principles of sustainable development in the sense that has the decision-maker taken into account the said principle and, on the basis of relevant considerations, arrived at a balanced decision?'

¹⁵⁷ *MC Mehta v Union of India* 2017 SCC OnLine SC 1378. See also *Shiv Shanker Yadav v State of UP* MANU/UP/2769/2013; *Manoj Misra v Delhi Development Authority* 2016 SCC OnLine NGT 114.

¹⁵⁸ See, for example, MoEF, 'Discussion Paper: Workshop on Reforms in Environmental Governance: With Special Reference to Establishment of National Environment Assessment and Monitoring Authority (NEAMA)' (2010); Report High Level Committee to review various Acts administered Ministry of Environment, Forest and Climate Change (2014).

In any case, India has not experienced much success in designing effective and successful environmental regulators in the past. The Coastal Zone Management Authorities under the Coastal Regulation Zone (CRZ) Notifications of 1991 and 2011, as well as the Biodiversity Boards and Biodiversity Management Committees constituted under the Biological Diversity Act 2002, at the central, state and local levels are similarly struggling to meet their statutory mandate.¹⁵⁹ Bodies such as the Environment Pollution Control Authority (constituted to prevent and control environmental pollution in the NCR) and the Dahanu Taluka Environment Protection Authority (constituted to protect the ecologically fragile Dahanu Taluka) have had some success. But these are difficult to replicate as, first, their geographical and subject-matter mandate is much narrower than the other regulators, and, second, the judiciary's initial and/or continued engagement with issues that these bodies deal with is likely to have had a positive impact. However, one important commonality between these two bodies that has contributed to their effective functioning and could be an important learning is the active participation of technical experts.¹⁶⁰

Therefore, proposals to set up new institutions and replace the poorly functioning Boards have to be carefully considered, lest we worsen the existing situation rather than ameliorate it. Meanwhile, it might be advisable considering some incremental changes that could lead to significant gains.

Filling up vacancies in Boards and appointing people with proper qualifications to the job is neither a politically sensitive issue nor a huge financial burden on the state exchequer. Nothing but bureaucratic and political disinterest, or even lethargy, explains delays in appointments. Similarly, enhancing the technical expertise and capacity of the Boards will go a long way towards improving the quality of standard setting, pollution control measures, the assessment of environmental impacts and remediation measures.

While the regulator's tool chest could accommodate more instruments, the problem is largely with the regulator and its capacity to select the appropriate tool and deploy it effectively. The so-called 'low-hanging fruits' of deliberate actions that strengthen the regulatory actors will fortify the regulatory structure from within and counter arguments to dismantle them.

¹⁵⁹ Manju Menon et al, *CZMAs and Coastal Environments: Two Decades of Regulating Land Use Change on India's Coastline* (CPR-Namati Environmental Justice Program, 2015); Kanchi Kohli and Shalini Bhutani, 'Biodiversity Management Committees: Lost in Numbers' (2014) XLIX(16) *Economic and Political Weekly* 18.

¹⁶⁰ Geetanjoy Sahu and Armin Rosencranz, 'Court-Appointed Monitoring Committees: The Case of the Dahanu Taluka Environment Protection Authority' (2009) 5(2) *Law Environment and Development Journal* 185.





The Prehistory of Community Forestry in India

Ramachandra Guha

From Conflict to Collaboration

“Liberty and forest laws are incompatible,” remarked an English country vicar, speaking on behalf of villagers shut out of woodland reserved for the exclusive use of the king, in 1720.¹ The history of state forestry is indeed a history of social conflict. In monarchies and in democracies, in metropolitan Europe as well as in colonial South Asia, the state management of forests has met bitter and continuous opposition. On the one side are the professional foresters who believe that timber production can be ensured only through the exclusion of humans and their animals from wooded areas; on the other, the peasants, pastoralists, charcoal ironmakers, basketweavers, and other such groups for whom access to forests and forest resources is crucial to economic survival. Environmentalists have added to the criticisms of these latter groups, charging foresters with simplifying complex ecosystems in the direction of commercially valuable but biologically impoverished monocultures.

These contending parties have battled for more than two hundred years. In continental Europe, the eighteenth and nineteenth centuries were peppered with social protest movements against the state management of forests. These protests inspired, among other things, Karl Marx’s first political writings and a memorable novel by Honore de Balzac capturing peasant hostility to forest officials.² When the European model of strict state control over forests was exported to the colonies, the disaffected peasants and tribals responded with arson and violence. Movements over forest rights were a recurring phenomena in colonies ruled by the British, the Dutch, and the French. The conflicts persisted when the post-colonial governments of countries such as Malaysia and Indonesia followed the authoritarian model of forest management inherited from the colonizer.³

In recent decades, however, the global discourse on forestry has moved towards a more accommodationist perspective. Foresters and peasant protesters now seem to talk to, rather than talk past, each other. A willingness to listen to and at least partially incorporate the other point of view has replaced the rigid and uncompromising attitude of the past. Within the forestry profession itself, skeptics doubt the contemporary relevance of the custodial and policing approaches previously followed. A system of natural resource management crafted in absolutist and colonialist

times clearly needed to be seriously modified or even overthrown.⁴ Social activists and community leaders have, meanwhile, moved from demanding a total state withdrawal from forest areas to asking governments to more seriously and sympathetically consider the rights of forest-dependent communities.⁵

With this move from conflict to collaboration have come shifts in the language of forestry itself. Terms such as “scientific forestry” and “rational land management,” euphemisms for state control and commercial timber production, are being rapidly replaced by sweet-sounding phrases such as “community management,” “participatory development,” and “joint forest management.” While these terms have come into vogue in the last two decades, they have, in fact, a very long genealogy. From the beginnings of state forestry, there have been serious attempts to democratize the regimes of resource management. Both dissidents within the bureaucracy as well as intellectual activists outside it tried hard to make the state respond more sensitively to the just claims of local communities. The ongoing programs of joint forest management in India can draw legitimacy and sustenance from a struggle that is at least a century old.

The Law and the Protests

The crucial watershed in the history of Indian forestry is undoubtedly the building of the railway network. In a famous minute of 1853, the governor general of India, Lord Dalhousie, wrote of how railway construction was both the means for creating a market for British goods and the outlet for British capital seeking profitable avenues for investment. Thus between 1853 and 1910 more than eighty thousand kilometers of track were laid in the subcontinent.⁶ The early years of railway expansion witnessed a savage assault on the forests of India. Great chunks of forest were destroyed to meet the demand for railway sleepers (over a million of which were required annually). The sal forests of Garhwal and Kumaun, for example, were “felled in even to desolation.” “Thousands of trees were felled which were never removed, nor was their removal possible.”⁷

This depredation brought home most forcefully the fact that India’s forests were not inexhaustible. At this time the British were unquestionably the world leaders in deforestation, having burnt or felled hundreds of thousands of acres of woodland in Australia, southern Africa, northeastern United States, Burma, and India.⁸ Knowing little of methods of sustained-yield forestry, they called in the Germans, who did. Thus in 1864 they established the Indian Forest Department, which for the first twenty-five years of its existence was serenely guided by three German inspectors general of forest—Dietrich Brandis, Wilhelm Schlich, and Bertold von Ribbentrop.⁹

For its effective functioning, the new department required a progressive curtailment of the previously untrammelled rights of use exercised by rural communities all over South Asia. An act was hurriedly drafted to establish the claims of the state to the forestland it immediately required, subject to the provision that existing rights not be abridged. This act was “infinitely milder and less stringent than that which is in force in most European countries.”¹⁰ The search commenced for a more stringent and inclusive piece of legislation. In 1869, the Government of India circulated to the

provinces a new draft act, which sought to strengthen the state's control over forest areas through the regulation and in some cases extinction of customary rights.

The new legislation was based on the assumption that all land not actually under cultivation belonged to the state. Of course, it was not easy to wish away the access to forests exercised in centuries past by peasants and other rural groups. The colonial state, however, argued that such use, however widespread and enduring, had been exercised only at the mercy of the monarch. Unless it had been expressly recorded in writing, customary use was deemed to be a "privilege," not a "right." And since the British government was the successor to Indian rulers, the ownership of forests and waste was now vested in it. "The right of conquest is the strongest of all rights," emphatically remarked one forest official. "It is a right against which there is no appeal."¹¹

There were, however, some notable dissenting voices within the colonial government. Sent the draft forest bill by the Government of India, the Madras Government in turn invited responses from various officers. The views of Narain Row, Deputy Collector of Nellore, are representative. The proposed legislation, he said, had no historical precedent, for "there were originally no Government forests in this country. Forests have always been of natural growth here; and so they have been enjoyed by the people."¹² Another Deputy Collector, Venkatachellum Puntulu, of Bellary, argued that the burden of the new legislation would fall most heavily on the poor. While large landlords would find it relatively easy to deny the state any claim over their forest property, unlettered peasants would not be able to prove rights of ownership, even though they traditionally used forests as common property. Criticizing the detailed rules prohibiting the collection of different kinds of forest produce, Puntulu penetratingly remarked that "the provisions of this bill infringe the rights of poor people who live by daily labor (cutting wood, catching fish and eggs of birds) and whose feelings cannot be known to those whose opinions will be required on this bill and who cannot assert their claims, like [the] influential class, who can assert their claims in all ways open to them and spread agitation in the newspapers."¹³

After several such responses came in, the Madras Board of Revenue told the Government of India that the claim of the state to uncultivated forests and wastes was virtually nonexistent:

There is scarcely a forest in the whole of the Presidency of Madras which is not within the limits of some village and there is not one in which so far as the Board can ascertain, the state asserted any rights of property unless royalties in teak, sandalwood, cardamoms and the like can be considered as such, until very recently. All of them, without exception are subject to tribal or communal rights which have existed from time immemorial and which are as difficult to define as they are necessary to the rural population. . . . [In Madras] the forests are, and always have been common property, no restriction except that of taxes, like the Moturpha [tax on tools] and Pulari [grazing tax] was ever imposed on the people till the Forest Department was created, and such taxes no more indicate that the forest belongs to the state than the collection of assessment shows that the private holdings in Malabar, Canara and the Ryotwari districts belong to it.

The Madras Government advanced three basic reasons for rejecting the bill drafted by the Government of India:

First, because its principles, scope and purpose are inconsistent with the existing facts of forest property and its history.

Second, because, even if the Bill were consistent with facts, its provisions are too arbitrary, setting the laws of property at open defiance, and leaving the determination of forest rights to a Department which, in this Presidency at all events, has always shown itself eager to destroy all forest rights but those of Government.

Third, because a Forest Bill, which aims at the regulation of local usages ought to be framed, discussed and passed by the local legislature.¹⁴

The objections were disregarded, and in 1878, the new bill passed. The act divided the forests of the subcontinent into three broad classes. State or reserved forests were to be carefully chosen, in large and compact areas that could lend themselves to commercial exploitation. The constitution of these reserves was to be preceded by a legal settlement that either extinguished customary rights of user, transferred them as “privileges” to be exercised elsewhere, or, in exceptional cases, allowed their limited exercise. In the second class, of “protected” forests, rights and privileges were recorded but not settled. However, all valuable tree species were to be declared as “reserved” by the state, while the Forest Department had the power to prohibit grazing and other ostensibly damaging practices.

The Forest Act also provided for a third class of forests—village forests. But as these lands had first to be constituted as reserved forests, the procedure aroused suspicion among the villagers, and this chapter remained a “dead letter.”¹⁵ Meanwhile, the area of forests under strict state control steadily expanded. In 1878, there were 14,000 square miles of state forest. By 1890, this had increased to 76,000 square miles, three-fourths of which were reserved forests. Ten years later, there were 81,400 square miles of reserved forests and 8,300 of protected forests. Given increasing demand for wood products, the state sought to establish firmer control over forests, both by expanding the area taken over under the Forest Act and by converting protected forests to reserved forest.

The Indian Forest Act of 1878 was a comprehensive piece of legislation that came to serve as a model for other British colonies.¹⁶ Within India, it allowed the state to expand the commercial exploitation of the forest while putting curbs on local use for subsistence. This denial of village forest rights provoked countrywide protest. The history of colonial rule is punctuated by major rebellions against colonial forestry—in Chotanagpur in 1893, in Bastar in 1910, in Gudem-Rampa in 1879–80 and again in 1922–23, in Midnapur in 1920, and in Adilabad in 1940. These rebellions sometimes extended over several hundred square miles of territory, involved thousands of villagers, and had to be put down by armed force. Even where discontent did not manifest itself in open rebellion, it was expressed through arson, non-compliance, and breaches of the forest law.

The participants in these protests were unlettered peasants and tribals, and we know far more of their deeds than their words. Nonetheless, their voices do figure here and there in the archives of the state, sometimes mediated by the language of

the officials reporting them. Thus in the 1880s, when the government of the Bombay Presidency was aggressively demarcating the rich teak forests of the Dang district, preparatory to their constitution as state reserves, a Bhil tribal chief sent in a petition stating that “we do not wish to let the Dang jungle [be] demarcated, for thereby we shall lose our rights and we and our poor rayat [cultivators] shall always be under the control of the Forest Department and the Department will always oppress us.”¹⁷ Around the same time, the colonial state was attempting to take over the *deodar* (cedar) forests of the upper Jamuna valley. These trees had suddenly become market-worthy, to service the then expanding railway network. But as a peasant bitterly observed, “the forests have belonged to us from time immemorial, our ancestors planted them and have protected them; now that they have become of value, government steps in and robs us of them.”¹⁸ Or consider, finally, these remarks of an administrator in the Bastar district of central India, on the determination of his tribal subjects to continue practicing swidden cultivation in what was now “government” forests: “On the road from Tetam to Katekalyan I found general dissatisfaction at the restriction of penda [swidden] cultivation. I was unable to convince them of its evils [*sic*]. Podiyami Bandi Peda of Tumakpal has to get his son married and for this purpose he wants to cultivate penda in the prohibited area. I told him he should not do it. He replied plainly that he would cultivate it and go to jail as he had to get his son married.”¹⁹

In 1871, the Madras Government predicted that the new act, if passed into law, would “place in antagonism to Government every class whose support is desired and essential to the object in view, from the Zamindar [landlord] to the Hill Toda or Korombar.” This was an astonishingly accurate prediction, for the Forest Department was unquestionably the most unpopular arm of the British Raj. The story of the numerous popular movements against state forestry, so long neglected by historians, is now attracting an array of chroniclers.²⁰ The critics were principally of two kinds. On the one side were scholars and politicians with a deep knowledge of rural conditions, and who sometimes formed part of popular movements themselves. Their criticisms of state forestry thus drew richly upon the feelings and grievances of the people most affected by it. On the other side were the rare (but, for that reason, significant) dissidents within the colonial bureaucracy, who opposed the centralizing thrust of government forest policy. The first set were outsiders so far as the apparatus of rule was concerned, but insiders with respect to popular opinion and popular consciousness. The second set were by virtue of race and status outsiders to Indian society, but insiders with regard to the policy of the state and the functioning of government.

Precocious Prophets

In 1878, the Poona Sarvajanic Sabha, a vastly respected nationalist organization in western India, bitterly opposed the new Forest Act. Despite its middle-class origins, the Sabha had consistently fought for the rights of the cultivator, urging that the colonial government lessen its burden of taxation on the peasantry.²¹ Now, in the

context of the Forest Act debate, it pointed out that state usurpation was grossly violative of customary rights over forests, for both “private grantees and village and tribal communities” had “cherished and maintained these rights with the same tenacity with which private property in land is maintained elsewhere.” The Sarvajanic Sabha did not, however, merely oppose the proposed Forest Act for its excessive emphasis on state control; it offered a more constructive and creative alternative. Thus the Sabha argued that

the better maintenance of forest cover could more easily be brought about by taking the Indian villager into confidence of the Indian Government. If the villagers were rewarded and commended for conserving their patches of forestlands, or for making plantations on the same, instead of ejecting them from the forestland that they possess, or in which they are interested, emulation might be evoked between neighboring villages. Thus more effective conservation and development of forests in India might be secured, and when the villagers have their own patches of forest to attend to, government forests might not be molested. Thus the interests of the villagers as well as the government can be secured without causing any unnecessary irritation in the minds of the masses of the Indian population.²²

The Sabha was advocating a far more democratic structure of forest management than that envisaged by the colonial government. Indeed, it was proposing the institution of a Vrikshamitra (Friends of the Trees) Award, one hundred and ten years before the Indian Government’s Ministry of Environment and Forests conceived and named such a scheme, for rewarding individuals and communities who had successfully protected or replenished forest areas.

Three years after the 1878 act was passed, the impact of state forestry on rural communities was foregrounded by the social reformer Jotirau Phule. Phule himself was a gardener by caste, and in general exceptionally alert to the problems of the agricultural classes.²³ The following is his description of the impact of the Forest Department on the livelihood of farmers and pastoralists in the Deccan countryside:

In the olden days small landholders who could not subsist on cultivation alone used to eat wild fruits like figs and jamun and sell the leaves and flowers of the flame of the forest and the mahua tree [both common trees of the Indian forest]. They could also depend on the village ground to maintain one or two cows and two or four goats, thereby living happily in their own ancestral villages. However, the cunning European employees of our motherly government have used their foreign brains to erect a great superstructure called the forest department. With all the hills and undulating areas as also the fallow lands and grazing grounds brought under the control of the forest department, the livestock of the poor farmers do not even have place to breathe anywhere on the surface of the earth.²⁴

These remarks drew attention to the dependence of the agriculturist on the produce of forests and other common lands. This dependence was even more acute in the tribal regions of middle India, where communities of hunter-gatherers, swidden agriculturists, and charcoal iron makers were likewise at the receiving end of the new

forest laws. These peoples found an eloquent spokesman in Verrier Elwin (1902–1964), a brilliant Oxford scholar and renegade priest who became the foremost interpreter of *adivasi* (tribal) culture in India.²⁵ Elwin was a pioneer of ecological anthropology, whose many works vividly showcased the intimate relationship between the forest world and the life of the *adivasi*. All tribals, he argued, had a deep knowledge of wild plants and animals; some could even read the great volume of Nature like an “open book.” Swidden agriculturists, for whom forest and farm shaded imperceptibly into each other, had an especial bond with the natural world. They liked to think of themselves as children of *Dharti Mata*, Mother Earth, fed and loved by her.

Elwin’s ethnographies are peppered with references to the *adivasi*’s love for the forest.²⁶ Tragically, the forest and game laws introduced by the British had made them interlopers in their own land. He quotes a member of the tribal group Gond, whose idea of heaven was “miles and miles of forest without any forest guards.”²⁷ As the anthropologist himself wrote in 1941:

The reservation of forests was a very serious blow to the tribesman. He was forbidden to practice his traditional methods of cultivation. He was ordered to remain in one village and not to wander from place to place. When he had cattle he was kept in a state of continual anxiety for fear they should stray over the boundary and render him liable to heavy fines. If he was a Forest Villager he became liable at any moment to be called to work for the Forest Department. If he lived elsewhere he was forced to obtain a license for almost every kind of forest produce. At every turn the Forest Laws cut across his life, limiting, frustrating, destroying his self confidence. During the year 1933–4 there were 27,000 forest offences registered in the Central Provinces and Berar and probably ten times as many unwhipped of justice. It is obvious that so great a number of offences would not occur unless the forest regulations ran counter to the fundamental needs of the tribesmen. A Forest Officer once said to me: “Our laws are of such a kind that every villager breaks one forest law every day of his life.”²⁸

Elwin’s writings were addressed equally to the colonial state and to the Congress nationalists, who in the 1940s were very much a government-in-waiting. The Congress, however, had not been especially sensitive to the rights of the tribals. But as Elwin reminded them, “the aboriginals are the real *swadeshi* [indigenous] products of India, in whose presence everything is foreign. They are the ancient people with moral claims and rights thousands of years old. They were here first: they should come first in our regard.”²⁹ He was deeply distressed when a Congress report on tribals followed the British authorities in asking for a ban on shifting cultivation. Now Elwin’s work had shown that, contrary to modernist prejudice, swidden as practiced by the Baiga, the Juang, and other tribes was an ecologically viable system of cultivation. When the nationalists recommended the ban, he wrote angrily that “the forests belong to the aboriginal. I should have thought that anyone who was a Nationalist would at least advocate *swaraj* [freedom] for the aboriginal!”³⁰

The significance of the forest in tribal life is a running theme in Elwin’s work. Noting that a majority of tribal rebellions had centered around land and forests, he pleaded for the greater involvement of tribals in forest management in free India.

Even if adivasis had no longer any legal rights of ownership, they had considerable moral rights. And as tribals were as much part of the national treasure as forests themselves, there should be an amicable adjustment between forest management and tribal needs. Even where commercial forest operations became necessary, he said, these should be undertaken by tribal cooperatives and not by powerful private contractors.³¹

After independence Verrier Elwin became the first foreigner to be granted citizenship of free India. In 1954, he was appointed Adviser on Tribal Affairs to the Government of India (with special reference to the North-east Frontier Agency). He was also to serve on more than one high-level, all-India committee on tribal policy. From his first official appointment until his premature death in 1964, Elwin repeatedly urged a reconsideration of forest policy, such that it might, at last, come to more properly serve tribal needs. In this he had little success for forest management became, if anything, more commercially oriented in independent India.³² Towards the end of his life, the anthropologist wrote with some bitterness of how the victims of government policy were being unfairly blamed for the destruction of forests:

There is constant propaganda that the tribal people are destroying the forest. When this was put to some of the villagers, they countered the complaint by asking how they could destroy the forest. They owned no trucks; they hardly had even a bullock-cart; the utmost that they could carry away was a headload of produce for sale to maintain their families and that too against a license. The utmost that they wanted was wood to keep them warm in the winter months, to reconstruct or repair their huts and carry on their little cottage industries. Their fuel-needs for cooking, they said, were not much, for they had not much to cook. Having explained their own position they invariably turned to the amount of [forest] destruction that was taking place all around them. They asked how the zamindars [landlords], in violation of their agreements and the forest rules and laws, devastated vast tracts of forest land right in front of officials. They also related how the contractors stray outside the contracted coupes, carry loads in trucks in excess of their authorised capacity and otherwise exploit both the forests and the tribal people.

There is a feeling among the tribals that all the arguments in favor of preservation and development of forests are intended to refuse them their demands. They argue that when it is a question of industry, township, development work or projects of rehabilitation, all these plausible arguments are forgotten and vast tracts are placed at the disposal of outsiders who mercilessly destroy the forest wealth with or without necessity.³³

From a great Englishman who devoted his life to the service of the Indian poor, we move on to a great Englishwoman who did likewise—Madeleine Slade, the daughter of an admiral who came from England to join Gandhi in his Sabarmati Ashram in 1926. Gandhi adopted her as his own daughter and gave her the name Mira Behn. She played a prominent role in the anti-colonial struggle and was jailed several times.

In 1945, Mira Behn set up a Kisan (peasant) Ashram near the holy town of Hardwar, and two years later moved up the Ganges beyond Rishikesh, where the river descends into the plains. In 1952, she shifted her base again, to the Bhilangna valley in the interior Himalaya. Here she stayed still 1959 when ill health and possibly dissatisfaction with the policies of independent India made her migrate to Austria.³⁴

The peasants of the central Himalaya are, of course, as dependent on forest produce as the tribals of the Indian heartland with whom Elwin long worked. Here, one unfortunate consequence of state forest management was the gradual replacement of *banj* oak (*quercus incana*), a tree much prized by villagers as a source of fuel, fodder, and leaf manure, by *chil* (or *chir*) pine (*pinus roxburghii*), a species more valued commercially as a source of timber and resin.³⁵ This transition had serious ecological implications, for the thick undergrowth characteristic of banj forests absorbed a high proportion of the rainwaters of the fierce Himalayan monsoon. This water then slowly percolated downhill. Below the oak forests were thus found “beautiful sweet and cool springs,” the main source of drinking water for the hill villagers. By contrast, the floor of pine forests was covered thinly by needles, and had much less absorptive capacity. In hillsides dominated by chil, the rain rushed down the slopes, carrying away soil, debris, and rock, contributing thereby to floods.

Why were the banj forests disappearing in the Himalaya? Mira Behn’s own explanation revealed a sharp awareness of the sociology of forest management in the hills. “It is not merely that the Forest Department spreads the Chil pine,” she said, “but largely because the Department does not seriously organize and control the lopping of the Banj trees for cattle fodder, and . . . is glad enough from the financial point of view to see the Banj dying out and the chil pine taking its place. When the Banj trees grow weak and scraggy from overlopping, the chil pine gets a footing in the forest, and once it grows up and starts casting its pine needles on the ground, all other trees die out.”

Mira Behn continued: “It is no good putting all the blame on the villagers. . . . The villagers themselves realize fully the immense importance of these Banj forests, without which their cattle would starve to death, the springs would dry up, and flood waters from the upper mountain slopes would devastate their precious terraced fields in the valleys. Indeed all these misfortunes are already making their appearance on a wide scale. Yet each individual villager cannot resist lopping the Banj trees in the unprotected Government forests. ‘If I do not lop the trees someone else will, so why not lop them, and lop them as much as possible before the next comer.’”

Although Mira Behn does not explicitly make the point, it seemed that this shortsighted behavior of the hill peasant was related to the loss of community control, such that individual peasants no longer had a long-term stake in the maintenance of forest cover. This was a tendency aggravated by the commercial orientation of the Forest Department. Could anything be done to restore banj to its rightful place, and thus revive Himalayan economy and ecology? Mira Behn writes:

The problem is not without solution, for if trees are lopped methodically, they can still give a large quantity of fodder, and yet not become weak and scraggy. At the same time, if the intruding Chil pines are pushed back to their correct altitude (i.e. between 3,000 and 5,000 feet), and the Banj forests are resuscitated, the burden on the present trees will, year by year, decrease, and precious fodder for the cattle will actually become more plentiful. But all this means winning the trust and co-operation of the villagers, for the Forest Department, by itself, cannot save the situation. Nor can it easily win the villagers' trust, because the relations between the Department and the peasantry are very strained, practically amounting to open warfare in Chil pine areas. Therefore, in order to awaken confidence in the people, some non-official influence is necessary.

With the aid of local constructive workers, it should become possible to organize village committees and village guards to function along with the Forest Department field staff which should be increased, and also given special training in a new outlook towards the peasantry. In this way it should be feasible to carry out a well-balanced long term project for controlled lopping and gradual return of the Banj forests to their rightful place, by systematic removal of Chil pines above 5,500 feet altitude to be followed by protection of the young Banj growth. The Banj forests are the very centres of nature's economic cycle on the southern slopes of the Himalayas. To destroy them is to cut out the heart and thus bring death to the whole structure.

Mira Behn sent reports of her findings, with photographs, to Prime Minister Jawaharlal Nehru. He passed them on to the concerned officials, but nothing seems to have come of it; it appears that the Indian Forest Department of the 1950s would not change its ways.

A Democratizing Forester

The quotes offered in the previous section are all strikingly contemporary. To those who know something of the people behind them, they are also perfectly in character. Phule, Elwin, and Mira Behn, as well as the leaders of the Poona Sarvajanik Sabha, had a deep knowledge of agrarian life. Alert to the inequities in access to natural resources brought about by the new laws, they would vigorously polemicize on behalf of the victims of state forest management.

Dietrich Brandis was a prophet of community forestry who came from the unlikeliest of backgrounds. He was a forest officer; in fact, no less than the first inspector general of forests (IGF) in India. In nineteen years as IGF (1864–1883), he laid the foundations of state forestry in India. A man of great energy, he toured widely in the subcontinent, writing authoritative reports on the direction forest management should take in the different provinces of British India.³⁶ In the realm of silviculture, he formulated the systems of valuation and forest working still widely in use. As a former university don himself (he came to the service of the Raj from the University

of Bonn), Brandis started a college for training subordinate staff, arranged for higher officials to be trained on the continent, and helped set up the Forest Research Institute in Dehradun.

The scientific and administrative aspects of Brandis's legacy are not our focus here, but rather his *sociology* of forest management, his understanding of the social and political contexts within which state forestry had to operate in India.³⁷ Here Brandis's views must be immediately distinguished from almost all other forest officials, Indian or European, before or since. These officials counterpose "scientific" forestry under state auspices to the customary use of forests by rural communities, which they have always held to be erratic, unsystematic, wasteful, and shortsighted. It is thus that the forest officials justify their territorial control of over one-fifth of India's land mass, claiming that they alone possess the technical skills and administrative competence to manage woodland.

To be sure, Dietrich Brandis shared this creedal faith in the scientific status of sustained-yield forestry. He also believed that the state had a central role to play in forest management. But what he certainly did not share was his colleagues' skepticism of the knowledge base of rural communities. For example, Brandis wrote appreciatively of the widespread network of sacred groves in the subcontinent. These he termed, on different occasions, the "traditional system of forest preservation" and examples of "indigenous Indian forestry." In his tours he found sacred woodlands "most carefully protected" in many districts—from the *Devara Kadus* of Coorg in the south to the *deodar* temple groves in the Himalaya. At the other end of the social spectrum, Brandis also wrote appreciatively of forest reserves managed by Indian chiefs. He was particularly impressed by the Rajput princes of Rajasthan, whose hunting preserves provided game for the nobility as well as a permanent supply of fodder and small timber for the peasantry. The British stereotype of the Indian Maharaja was of a feckless and dissolute ruler, but as Brandis pointed out, in strenuously preserving brushwood in an arid climate the Rajputs had "set a good example, which the forest officers of the British government would do well to emulate."³⁸

In Brandis's larger vision for Indian forestry, a network of state reserves would run parallel to a network of village forests. The Forest Department would take over commercially valuable and strategically important forests, while simultaneously encouraging peasants to collectively manage areas left out of these reserves. Through a series of reports and memoranda written over a decade, the ICF tried to persuade the colonial government that a strong system of village forests was vital to the long-term success of state forestry itself.

The first such report was written in 1868, and pertained to the southern province of Mysore. This was a closely argued document suggesting the creation of village forests throughout Mysore, managed on a rotational cropping system, with freshly cut areas closed to fire and grazing. Ideally, each hamlet would have its own forest, but in many cases it might become necessary to constitute a block to be used by a group of villages. Such forests would provide the following items *free of cost*—firewood for home consumption and for sale by "poor people with headloads"; wood for agricultural implements and the making and repairing of carts; wood,

bamboo, and grass for thatching, flooring, and fencing; leaves and branches for manure; and grazing except in areas closed for reproduction. On the payment of a small fee, wood would be made available for houses and for use by artisans.

In Brandis's scheme, these forests would be put under a parallel administrative system, with a village forester for each unit, a forest ranger for all the village forests in each *taluk* (county), and a head forest ranger for the district as a whole, this man reporting to an assistant conservator of forests. He anticipated that the system would be self-supporting, with any surplus used for local improvements. In this manner, peasants would come to feel an interest "in the maintenance and improvement of their forests." Brandis also hoped that Forest Department control over village forests would give way in due course, with the "leading men" of each village assuming responsibility for management.³⁹

Forwarding his report to the Government of India, Brandis noted significantly that it was "the first of a series of measures" which he proposed "to suggest in various Provinces for the better utilization and for the improvement of the extensive wastelands which will not be included in the State Forests": that is, as a prelude to recommending a countrywide system of community forests.⁴⁰ Unhappily, the British officials of the Raj lacked Brandis's understanding of the biomass economy of rural India, the vital dependence of agrarian life on the produce of the forests. They also lacked his faith in local knowledge and local initiative. The opposition to Brandis claimed that his scheme would lead to a loss of state revenues while undermining the powers of district officials. Also invoked was an early version of the "Tragedy of the Commons" argument. For one official, "the village communities of Mysore, without cohesion and often split up into factions by caste, could not be entrusted with the powers, or competent to perform the functions assigned to them in [Dr Brandis's] scheme." Another commented that the scheme would fail "as each man, when the least removed from supervision, would cut whatever he might require for himself without any regard to the interests of his neighbours."⁴¹ The Government of India's final, negative verdict rested on a classic piece of colonial stereotyping. "The prejudices and rivalries of Natives," it said, "might be excited if men of different classes and castes shared in the same forests."⁴²

Brandis did not lightly accept this judgment. In a defiant note, he reviewed the case afresh, and made another forceful plea in favor of village forests. He drew pointed attention to the flourishing system of community forests on the continent, where scientific foresters exercised technical supervision over woodland managed for the exclusive benefit of villages and small towns. In Europe, wrote Brandis, "Such Communal Forests are a source of wealth to many towns and villages in Italy, France and Germany; property of this nature maintains a healthy spirit of independence among agricultural communities; it enables them to build roads, churches, school-houses, and to do much for promoting the welfare of the inhabitants; the advantages of encouraging the growth, and insisting on the good management of landed communal property, are manifold, and would be found as important in many parts of India as they have been found in Europe."⁴³

Following his failure in Mysore, Brandis resurrected his proposals in the debate leading up to the 1878 Forest Act. Here he urged the administration "to demarcate

as state forests as large and compact areas of valuable forests as can be obtained free of forest rights of persons,” while leaving the residual area, smaller in extent but more conveniently located for their supply, under the control of village communities. He hoped ultimately for the creation of three great classes of forest property, based on the European experience: state forests, forests of villages and other communities, and private forests. State ownership had to be restricted, argued Brandis, on account of the “small number of experienced and really useful officers” in the colonial forestry service and out of deference to the wishes of the local population. For “the trouble of effecting the forest rights and privileges on limited well-defined areas is temporary and will soon pass away, whereas the annoyance to the inhabitants by the maintenance of restrictions over the whole area of large forest tracts will be permanent, and will increase with the growth of population.”⁴⁴

Here was an uncanny anticipation of the widespread popular opposition that has been such a marked feature of the subsequent history of Indian forestry. But Brandis was overruled by more powerful civil servants within the colonial bureaucracy, and the 1878 Forest Act was based firmly on the principle of state monopoly.⁴⁵ But the German forester was a remarkably persistent man. As he remarked shortly after relinquishing the post of inspector general, systematic forestry in India “was like a plant of foreign origin, and the aim must be to naturalize it.” On the social side, this process of indigenization could be accomplished by encouraging native chiefs, large proprietors, and especially village communities to develop and protect forests for their own use. In the last instance the initiative lay with the government, which, insisted Brandis, stood to gain enormously from a successful system of communal forests. “Not only will these forests yield a permanent supply of wood and fodder to the people without any material expense to the State,” he wrote, “but if well managed, they will contribute much towards the healthy development of municipal institutions and of local self-government.”⁴⁶

In 1897, well into his retirement in Germany, Brandis returned to the subject of community forests. Long after he had severed all formal contacts with British India, Brandis continued to be deeply concerned that Indian forestry should cease to have “the character of an exotic plant, or a foreign artificially fostered institution.” This concern was consistent with his larger democratic vision for forestry in the subcontinent. Thus he suggested that “native” forest officers, as they distinguished themselves, be sent to study the forestry system operating in Germany. Notably, Brandis had in mind their social as well as silvicultural education. As he concluded his essay, Indian foresters, if sent to Germany, “will find that the villages, which own well-managed communal forests, are prosperous, although now and then they complain of the restrictions that a good system of management unavoidably imposes. What Indian forest officers will learn in this respect in Germany will be really useful to them in India.”⁴⁷

Perhaps by now Brandis despaired of British officials in India taking seriously his proposals for the constitution of village forests. Hence this indirect approach, wherein Indian forest officers trained on the continent might be able to better see the benefits of community forests. In the event, Indian officials (whether trained in Germany or not) have been, for the most part, hostile to any suggestion that local communities could be encouraged to manage forest areas for their own use. It is,

indeed, this territorial monopoly and indifference to the demands of rural communities that have made the Forest Department the object of such relentless criticism in recent years.

The Indian Forest Department has been the subject of sharp attack for its authoritarian style of functioning; and yet, in an interesting paradox, the founder of the department had himself anticipated that a narrow reliance on state control and punitive methods of management would lead to popular disaffection. While terms such as “social forestry,” “community forestry,” and “joint forest management” have only now come into currency, the principles they embody would have been readily recognized, and indeed warmly commended, by the first head of the Forest Department in India.

The Himalayan Case

For all their insight, knowledge, and passion, these precocious advocates of community forestry did not have much impact on state policy. Control and commercialization remained the dominant motifs of state forest policy. The chapter on village forests in the 1878 act remained a dead letter. Government forest policy, in the colonial as well as postcolonial periods, continued to seriously ignore village needs, demands, and interests. The principle of state monopoly has remained paramount, with one very partial exception.

The Kumaun and Garhwal hills of present-day Uttar Pradesh contain the best stands of softwood in the subcontinent. These coniferous species have been highly prized since the early days of colonial forest management. Between 1869 and 1885, for example, some 6.5 million railway sleepers made from *deodar* (*cedrus deodarus*, the Indian cedar) were exported from the valley of the Yamuna, in the princely state of Tehri Garhwal.⁴⁸ Adjoining Tehri Garhwal to the east was the British-administered Kumaun division, with its rich stands of chir pine. Here forestry operations concentrated simultaneously on expanding the area under chir (at the expense of oak) and exploiting the tree both for timber and for resin. Between 1910 and 1920, for example, the number of trees tapped for resin increased from 260,000 to 2,135,000.⁴⁹ The pine trees of the Central Himalaya were the only source, within the British Empire, of oleo-resin, an extract with a wide range of commercial and industrial applications. Likewise, the timber of deodar and chir, as well as fir and spruce, constituted a strategically valuable resource for the colonial state, exploited with profit to service the military campaigns of the two world wars.

In the Himalaya, as elsewhere, commercial forestry under state auspices was made possible only through a denial of customary rights of ownership and use. In these hills, forests and grassland were a crucial resource for the agro-pastoral production system. In fact, the fragmentary evidence available to historians does suggest the existence of a fairly widespread system of common property resource management— with grass reserves walled in and well looked after, oak forests managed by the village community, and sacred groves lovingly protected. Not surprisingly, the government’s attempts to seize vast areas under local control and reconstitute them as “reserved forests” evoked opposition. In the early years of state management, a

petition from a discontented hillman evocatively recalled a golden age when the villagers had full control over their forest habitat:

In days gone by every necessities of life were in abundance to villagers than to others [and] there were no such government laws and regulations prohibiting the free use of unsurveyed land and forest by them as they have now. The time itself has now become very hard and it has been made still harder by the imposition of different laws, regulations, and taxes on them and by increasing the land revenue. Now the village life has been shadowed by all the miseries and inconveniences of the present day laws and regulations. They are not allowed to fell down a tree to get fuels from it for their daily use and they cannot cut leaves of trees beyond certain portion of them for fodder to their animals. But the touring officials still view the present situation with an eye of the past and press them to supply good grass for themselves and their [retinue] without thinking of making any payment for these things to them who after spending their time, money and labour, can hardly procure them for their own use. In short all the privileges of village life, as they were twenty years ago, are nowhere to be found now, still the officials hanker after the system of yore when there were everything in abundance and within the reach of villagers.⁵⁰

When such protests went unheeded, the sentiments underlying them were to manifest themselves in sustained and organized resistance on the part of the Himalayan peasantry. In fact, this region probably witnessed more and more serious social conflict than any other forest region of India. There were major peasant movements against state forest policies in 1904, 1906, 1916, 1921, 1930, and 1942.⁵¹ These recurrent conflicts, remarked one sensitive official, were a consequence of “the struggle for existence between the villagers and the Forest Department; the former to live, the latter to show a surplus and what the department looks on as efficient forest management.”⁵²

The most significant forest movement in Kumaun and Garhwal took place in 1921. This took the shape of labor strikes, which crippled the administration, and the widespread burning of pine forests. A total of 395 recorded fires burnt an estimated 246,000 acres of forest. Hundreds of thousands of resin channels were destroyed. Constituting a direct challenge to the state to relax its control over forest areas, these protests enjoyed enormous popular support, which made it virtually impossible for the administration to detect the people responsible for the fires. The fires were generally directed at areas where the state was at its most vulnerable, for example, compact blocks of chir forest worked for timber and/or resin. Significantly, there is no evidence that the large areas of broad-leaved forest, also controlled by the state, were at all affected. Thus arson was not random but carefully discriminating—it spared those species more useful to the village economy.⁵³

In the vanguard of the 1921 movement were soldiers who had fought for the British in the First World War. Kumaun and Garhwal had long supplied hardy and exceptionally brave soldiers for the British Army—indeed, three of the five Victoria Crosses awarded to Indians between 1914 and 1918 went to this region. These former men in uniform saw the forest regulations as a bitter betrayal of their interests by the white overlord for whom they had so recently risked their lives. Their protests

alarmed the colonial state, for apart from being a reservoir of able-bodied men whom it hoped to continue to recruit for the wars it had to fight, the Kumaun hills bordered both Nepal and Tibet—regions not under direct British suzerainty but in which it had strong trading and political interests.

In the wake of the popular protests, a magisterial critique of government forest policy was published by Govind Ballabh Pant. Pant was a rising lawyer from a peasant household in Almora who went on to become one of the foremost of Indian nationalists, after independence taking office successively as chief minister of Uttar Pradesh and home minister of the Government of India. His 1922 booklet *The Forest Problem in Kumaun* described the “burial of the immemorial and indefeasible rights of the people of Kumaun,” buried, that is, “between the property-grabbing zeal of the revenue officers and the exhortations of experts of the forest department.” As he put it, with legal precision, “the policy of the Forest Department can be summed up in two words, namely, encroachment and exploitation.” Several decades of a single-minded commercial forestry had led to a manifest deterioration of the agrarian economy: “Symptoms of decay are unmistakably visible in many a village: buildings are tottering, houses are deserted, population has dwindled and assessed land has gone out of cultivation since the policy of [forest] reservation was initiated. . . . Cattle have become weakened and emaciated and dairy produce is growing scarce every day: while in former times one could get any amount of milk and other varieties for the mere asking, now occasions are not rare when one cannot obtain it in the villages, for any price for the simple reason that it is not produced there at all.”⁵⁴

Pant’s analysis was rooted in a deep knowledge of the local context. He took it upon himself to combat the charge, commonly levied against the hill peasant, “of reckless devastation,” a charge “sedulously propagated by prejudiced or ignorant persons.” As he wrote,

The spacious wooded areas extending over the mountain ranges and hill sides bear testimony to the care bestowed by the successive generations of the Kumaonies. All of them are not of spontaneous growth and specially the finer varieties bespeak his labour and instinct for the plantation and preservation of the forest. A natural system of conservancy was in vogue, almost every hill top is dedicated to some local deity and the trees on or about the spot are regarded with great respect so that nobody dare touch them. There is also a general impression among the people that everyone cutting a tree should plant another in its place. . . . Grass and fodder reserves are maintained, and even *nap* [cultivable] lands are covered with trees, wherever, though in few cases, such land could be spared from the paramount demand of cultivation. Special care is also taken by the villagers to plant and preserve trees on the edges of their fields.⁵⁵

From this analysis, the solution logically offered was to give back to the peasants the woodland that they traditionally regarded as being within their village boundaries. “If the village areas are restored to the villagers, the causes of conflict and antagonism between the forest policy and the villagers will disappear, and a harmony and identity of interests will take the place of the distrust, and the villager will begin to protect the forests even if such protection involves some sacrifice or

physical discomfort.” Pant envisaged that these areas would be under the control of the village panchayats, or councils, under whose direction the “natural system of conservancy” would once again come to the fore. As he shrewdly observed, “some restrictions will be there, *but these will proceed from within, and will not be imposed from without.*”⁵⁶

Clearly, Pant drew upon and systematized the knowledge, perceptions, and analysis of the peasant folk of the Kumaun Himalaya. Thus, after the popular protests in 1921, the Government of the United Provinces set up a Kumaun Forest Grievances Committee. This committee toured the hills, examining some five thousand witnesses in all. Peasant activists submitted dozens of petitions to the committee, on behalf of individual villages. These identified blocks of forest near every village, where peasants would have *exclusive* rights of fuel and fodder collection, timber for building, wood for ploughs, bamboos for basket making, etc. It was being proposed that villagers should have full rights over these forests, which they would manage through their own panchayat.⁵⁷

Based on the evidence it collected, the committee finally concluded that “any attempt to strictly enforce these [forest] rules would lead to riots and bloodshed.” It thus divided the existing reserved forests into two categories—Class I, which were to be managed not by the forest officials but by the civil administration (in theory more sympathetic to rural needs), and Class II, constituting the commercially valuable wooded areas, which were to remain with the Forest Department. It also recommended that the government consider the constitution of village forests as per the demands of the people of Garhwal and Kumaun.⁵⁸

Bureaucracies move at their own pace, and only in 1930 the rules were passed allowing for the formation of van panchayats, or village forests, in the hill districts of the United Provinces. These allowed for a forest patch to be handed over to a village if it lay within its settlement boundaries, and if more than one-third of its residents had applied for permission to the deputy commissioner (DC). Once the DC gave the go-ahead, then the villagers elected, by voice vote, a council (*panch*) of five to nine members. This council in turn elected a head (*sarpanch*) among themselves. The van panchayat was empowered to close the forest for grazing, regulate cutting of branches and collection of fuel, and organize the distribution of forest produce. It could appoint a watchman, whose salary would be paid by villagers’ contributions to the panchayat. The panchayat could levy fines, although if the offender did not pay it had then to go to the civil courts for redressal. The felling of trees, however, required the permission of the Forest Department. The department also claimed 40 percent of the revenue from any commercial exploitation. Of the rest, 20 percent would go to the *zilla parishad* (district council), with the balance 40 percent kept with the DC on behalf of the van panchayat, which with that official’s written consent could use the funds for roads, schools, and other local improvements.

There are now in excess of 4,000 van panchayats in Kumaun and Garhwal, covering an area of just less than half a million hectares. An official report of 1960 remarked that many of these village forest councils had done “exemplary work in connection with forest protection and development.”⁵⁹ A more recent survey has concluded that the panchayat forests are often in a better condition than the reserved forests. Of twenty-one panchayats surveyed in three districts, the forest stock

in thirteen of these were in good condition, in four in medium condition, in three in poor condition. The researcher concluded that van panchayats have, by and large, maintained oak forests very well, especially in contrast to the dismal condition of the reserves (except for those reserves distant from habitations). The position in respect of chir forests is not so clear, but these seem to have done about as badly under van panchayat control as in the reserves. Various studies suggest that, overall, panchayat forests seem to be in as good or better condition than the reserves.⁶⁰

The van panchayat system constitutes the only network of village forests mandated by law in all of India.⁶¹ The concession was made by a colonial state worried of losing control in a sensitive and strategically important border region, and it was not to be replicated elsewhere. After independence, the van panchayat regime was not extended to the adjoining region of Tehri Garhwal, where Mira Behn worked in the 1950s, and where it might have very well contributed to preserving and enhancing the oak forests. Within Kumaun, too, there is considerable resentment over the curbs placed on the autonomous functioning of van panchayats.⁶² Though technically under the control of the villagers, the Forest Department can veto schemes for improvement, while of the revenue generated, 40 percent is swallowed by the state exchequer. Forty percent of the rest is by law granted to the village, but this money too first finds its way into a “consolidated fund” controlled by the DC, to which individual panchayats have then to apply. There are signs of an emerging movement to do away with these constricting rules, to make the management of the panchayats come fully under the control of the villagers. A chronicler of this discontent, himself quite aware of the long history of forest-related protests in Kumaun and Garhwal, writes that “those who know the history of forest struggles say that . . . the van panchayat movement will be the biggest such movement in the hills.”⁶³

Two Cheers for Joint Forest Management

From the inception of state forestry in India, perceptive critics have argued for a democratization of resource control, for a correction of the commercial bias promoted by successive governments, and for a proper participation in management and decision making by local user groups. Arguments first offered in the 1870s, and reiterated in subsequent decades, were revived, or reinvented, in the 1970s by the now-famous Chipko movement. It is no accident that Chipko originated in Garhwal and Kumaun, the part of India that has seen some of the most intensive conflicts between the state and the peasantry over forest resources.

The 1970s were marked by a series of forest movements in different parts of India. These took place in the Himalaya, in the Western Ghats, and, above all, in the vast tribal belt extending across the heart of peninsular India. In the Chotanagpur plateau, forest protests formed an integral part of the larger movement for a separate tribal homeland of Jharkhand, carved out from the huge, unwieldy, and predominantly non-tribal state of Bihar. In one much celebrated case, tribals demolished a plantation of teak, a highly prized furniture wood, that was coming up on land previously under the *sal* tree (*Shorea robusta*), a species of far greater benefit to the

local economy. Their slogan, “Sal means Jharkhand, sagwan (teak) means Bihar” was a one-sentence critique of the narrow commercial ends of state forestry.⁶⁴

Since the 1970s, there has been an ongoing, nationwide debate on forest policy in India, a debate fuelled by the continuing social tension in forest areas and the evidence of massive deforestation provided by satellite imagery. This debate has passed through three distinct if chronologically overlapping phases. The first phase might be designated the “politics of blame.” The activists speaking on behalf of disadvantaged groups have held the forest officials responsible for environmental degradation and popular discontent. The officials, in turn, have insisted that growing human and cattle populations are the prime reason why fully half of the 23 percent of India legally designated as “forest” was without tree cover.

The forestry debate of the 1970s and the 1980s drew, at times, on the heritage of earlier movements and critiques. The peasants of Garhwal and Kumaun, as this writer found out while doing field work there in 1982–83, were acutely conscious of how Chipko itself drew on a long and honorable history of peasant resistance to state forestry. Tribal activists in Madhya Pradesh and Bihar, meanwhile, were not unfamiliar with the work and message of Verrier Elwin. And in the villages of the Deccan, social workers liked to offer the same quote of Jotirau Phule’s reproduced earlier in the paper, as proof that in the agro-pastoral system of that region, proper access to forests and pasture was vital to survival, and that it was the “great superstructure” of the Forest Department that continued to deny herders and farmers this access.⁶⁵ However, perhaps the most direct connection between the past and the present of forest management was effected in the summer of 1982, when the Government of India circulated a new draft forest act. Activists and academics joined hands to demonstrate how the proposed legislation was solidly based upon and, indeed, took further forward the centralizing thrust and punitive orientation of the notorious Indian Forest Act of 1878. After a countrywide campaign, the draft bill was finally dropped by the state.⁶⁶

As tempers cooled and polemic exhausted itself, a second phase, the “politics of negotiation,” originated. In villages and state capitals, forest officers and their critics found themselves at the same table, talking and beginning to appreciate, if not fully understand, the other’s point of view. Concessions were made by each side, protests suspended by one, and leases of forest produce to industry cancelled by the other. One product of the growing dialogue between activists and bureaucrats was the approval, by the Indian Parliament in 1988, of a new National Forest Policy. Where the ruling Forest Policy of 1952 had stressed state control and industrial exploitation, the new document instead emphasized the imperatives of ecological stability and peoples’ needs.

Then, slowly and hesitatingly, commenced the third phase, “the politics of collaboration.” In the state of West Bengal, for example, the Forest Department initiated remedial action on its own, abandoning its traditional custodial approach by inviting peasants to cooperate with it. Thousands of village forest protection committees were constituted, each of which pledged to protect nearby forests in collaboration with the state. Thus previously authoritarian government officials joined with previously suspicious villagers to successfully regenerate the degraded *sal* forests of southwestern Bengal.

The success of “Joint Forest Management” or JFM in West Bengal has encouraged scholars, activists, and sympathetic civil servants to demand its replication in other parts of India. Outside its original home, however, the progress of JFM has been slow. Administrative styles and cultures of governance vary widely among the states and regions of India. So do individual orientations, with some forest officials still loathe to relinquish control, while others have been inspired to start village protection committees on their own.

A mapping of the forestry debate in contemporary India would therefore show significant regional variations. Some states are still stuck in the “politics of blame”; others have moved tentatively to the “politics of negotiation.” West Bengal and parts of Andhra Pradesh, Madhya Pradesh, and Himachal Pradesh have instituted the “politics of collaboration” through the creation of JFM regimes. In this last scenario there is abundant scope for improvement. As analysts have shown, the JFM model now promoted by the Government of India reflects and sometimes reinforces inequities within rural society. Gender and caste are two axes of discrimination, with women and low-caste members of the village community not having adequate representation or voice in the decision-making process (this is also true, to a great extent, of the van panchayats in Kumaun.) Likewise, pastoral groups and artisans, who have legitimate claims on forest resources, are sometimes given short shrift. Moreover, the forest officials still claim a monopoly of “scientific expertise,” refusing to entertain villagers’ own ideas on species choice, spacing, or harvesting techniques.⁶⁷

One serious problem with the JFM model, as currently promoted by the state and donor agencies, is that it allows the constitution of village forest committees only on forestland with less than 40 percent crown cover. This is a deeply constricting rule, which reserves to the state, and the state alone, exclusive rights over the best-clothed lands of India. Thus forests situated close to hamlets cannot come under JFM regimes if they have more than 40 percent tree cover. Again, the regulations, strictly interpreted, would mean that if local communities were to effectively protect and replenish degraded lands, such that the crown cover was to come to exceed that magic figure of 40 percent, the state could step in and remove the area from JFM—which would be a bizarre outcome indeed. Nor have changes in policy and orientation been accompanied by concomitant changes in legislation. Thus, the present regime is not flexible enough to allow for spontaneous community-initiated forest regimes to exist along with more orthodox JFM regimes. In some parts of India, the Forest Department is casting a covetous eye on areas well protected by village communities. Thus in the Uttar Pradesh hills, the old established panchayat forests, managed by villagers, are sought to be brought under the JFM system only so that bureaucrats would have a greater say in their management. A new, carefully thought out Indian Forest Act is called for, which allows both for areas to be managed under state-village partnerships as well as by self-generated, autonomous community regimes.

One can thus envision a fourth (and possibly final) phase for the Indian forestry debate, the “politics of *partnership*.” For collaboration, even where it does exist, takes place on terms set down by the state, through the officials of the Forest Department.

We need to move on to a more inclusively democratic structure, where the state listens to and learns from the community, and where the community itself recognizes and deals fairly with the inequities within its own ranks.

The evidence suggests that contemporary advocates of decentralized forestry have had far greater success than their precursors. One reason for this is the altered political context: Brandis, Pant, and company worked under a colonial, authoritarian regime; the partisans of Chipko and similar movements in a democratic system. The revival of forest protest in the 1970s also coincided with the international environmental debate, which foregrounded the use and abuse of forests worldwide. The work of Indian scholars had, meanwhile, demonstrated with authority that the century-old history of state forestry in India must be reckoned a failure, in both an ecological and social sense. Finally, the problems with government-directed development programs in much of the Third World had led to an increasing interest in nongovernmental forms of management and control.

These calls for forest reform from the outside were complemented by pressures from change from within. Starting with West Bengal, the governors themselves, namely the forest officials in charge of their vast landed estate, realized that old methods of control and exclusion were merely fuelling social conflict. An overworked and underfunded bureaucracy then started, slowly, to involve communities in forest working. What started as a strategic imperative became, at least for some forest officers, a sincere change of heart. Once the critics from without were being echoed by the dissidents from within, the process of reform accelerated. This is indeed the signal lesson of Indian forest history—that meaningful policy change comes about only when the sustained pressure by social movements and their intellectual sympathizers resonates with the feelings of powerful officials within the state bureaucracy. One or the other, by itself, will not do. When Brandis was active, he was handicapped both by his lone dissident voice within the Forest Department, and by the fact that there had not yet emerged an effective critique from outside. When Elwin, Mira Behn, and others propagated the feelings and aspirations of the peasants and tribals they worked with, the forest bureaucracy was, collectively and to the last man, deaf to their arguments and entreaties. Forest policy remained unbending and unchanging, with the exception only of the Kumaun hills. There, as we have seen, the popular protests and outside critics were partially successful not because of a honest rethinking by the state but by its concern that this sensitive border region must not be tempted into outright rebellion. Elsewhere, where this political imperative did not come into play, the colonial regime refused to heed the widespread criticisms of its system of forest exploitation.

In more recent times, however, the radical critics have been aided by the auto-critique of influential sections of the forest establishment. This confluence of external pressure and internal rethinking explains why, and how, the contemporary proponents of community forestry have, unlike their predecessors, been able to see their ideas and polemic become translated into official policy and (though less assuredly) into official practice. Nonetheless, there are indeed striking parallels between the ideas underlying the application of joint forest management today and the ideas of the early, prescient, and brave but for the most part unheard critics

of state forestry discussed in this essay. With respect to the role of forest dependent communities, for example, there is a shared faith in indigenous knowledge, in the management capacity and robustness of local institutions, and above all, a sharp focus on local access to the usufruct of the forests. Again, with respect to the role of the state, there is a common recognition of the essentially advisory role of the forest department, of its need to collaborate with rather than strictly regulate customary use, and of the justice of sharing revenues from forest working with the villagers. Then, and now, critics have called strongly for an attitudinal change among state officials, a retraining and retooling in keeping with the democratic spirit of the age. Finally, both past and present proponents of decentralization seem to converge in their larger vision for forest policy in India, a vision which in my understanding consists of three central principles: (1) that benefit sharing (between state and community) and local control are to be the key incentives to ensure sustainable management and minimize conflict; (2) that community-controlled forests would work as a complement to a network of more strictly protected areas, further from habitations, that continue under more direct state control; (3) and finally, that the restricting of state control to these latter areas is vital on grounds of equity (i.e., the respect for local rights and demands), efficiency (i.e., as the most feasible course, with the state not biting off more than it can chew), and stability (i.e., as the most likely way to lessen conflict).

There is little question that the ongoing attempts at reversing or mitigating state monopoly over forest ownership and management do constitute a significant departure from past trends. In a deeper sense, however, contemporary attempts at fostering participatory systems of forest management hark back to a much older tradition. In the late twentieth century, as in the late nineteenth century, there has arisen a movement for the democratization of forest management, for a system founded not on mutual antagonism but on genuine partnership between state and citizen. The first inspector general's vision for Indian forestry was abruptly cast aside in the 1860s and 1870s, but it may yet come to prevail. That would be a vindication of the life and work of Dietrich Brandis, but also of Jotirau Phule, Verrier Elwin, Mira Behn, Govind Ballabh Pant, and the Poona Sarvajanic Sabha.

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Notes

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35. The following discussion, as well as all the quotes therein, is drawn from Mira Behn, "Something Wrong in the Himalayas," essay of 1952 reproduced in *Khadi Gramudyog* 39, no. 2 (1992).
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43. Note on “Village Forests, Mysore,” by D. Brandis, 28 May 1870; *Ibid.*
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59. *Report of the Kumaun Forests Fact Finding Committee* (Lucknow: Government of Uttar Pradesh, 1960), 37.

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61. This statement needs to be slightly qualified. Madhu Sarin (personal communication) informs me that in 1985 the Government of Orissa enacted rules allowing for the constitution of village forests. However, the extent of these forests and their status is unclear. Again, immediately after the First World War, panchayat forests were initiated in the Madras Presidency—these functioned desultorily for several decades, and were finally wound up. See Franklin Pressler, "Panchayat Forests in Madras, 1913–52," paper presented to the Second Conference of the American Society of Environmental History, May 1987.
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67. There is a growing literature on these issues. I have benefited from the following essays and articles: Madhu Sarin et al., *Who is Gaining? Who is Losing? Gender and Equity Concerns in Joint Forest Management* (New Delhi: Society for Promotion of Wastelands Development, 1998); S. Palit, "Structural Changes in Forest Departments," paper presented at workshop organized by WWF-India, Hyderabad, 14–15 March 1997; Bhaskar Vira, *Institutional Changes in India's Forest Sector, 1976–1994—Reflections on Policy*, Research Paper Number 5, Oxford Centre for the Environment, Ethics and Society, November 1995; Sushil Saigal, *Beyond Experimentation: Emerging Issues in the Institutionalization of Joint Forest Management in India* (New Delhi: Society for Promotion of Wastelands Development, 1997); K. Sivaramakrishnan, "Comanaged Forests in West Bengal: Historical Perspectives on Community and Control," *Journal of Sustainable Forestry* 7, no. 3 and 4 (1998); Nandini Sundar, "Unpacking the 'Joint' in Joint Forest Management," forthcoming in *Development and Change*. The last two scholars, both anthropologists with a strong interest in historical research, are each preparing a monograph on JFM.

SHARACHCHANDRA LELE

ENVIRONMENT AND WELL-BEING

A Perspective from the Global South

I WRITE THIS FROM Bengaluru, during the lockdown imposed by the Modi government to tackle the COVID-19 pandemic. The lockdown has triggered two contrasting streams on social media. On the one hand, images of a cleaner Yamuna River, of the Himalayas newly visible from the hitherto polluted industrial towns in Punjab, and even of Mount Everest, which can now be seen from villages on the Gangetic plain, elicit comments like ‘Mother Earth is healing’ and ‘How can we retain the green dividend of COVID-19?’ On the other, the footage of hundreds of thousands of now-jobless migrant workers, confined in transit camps or desperately setting out to walk hundreds of miles to their villages, reveals the seamy underbelly of capitalist economic growth and the discrimination that runs deep in our society. In this context, with economies shattered and a global depression looming, the ongoing ‘green strategy’ debate in *NLR* may seem irrelevant. But I will argue that it is only if we engage in this debate, while using a broader, integrated socio-environmental perspective, that we can understand why ‘Mother Earth’ cannot heal herself as things stand, and why retaining the ‘green dividend’ of COVID-19 is intertwined with the fate of workers.

So far, the discussion in *NLR* has largely been restricted to the question of whether the ‘egalitarian green growth’ or ‘green new deal’ proposed by Robert Pollin should provide the road map for environmental strategy, or whether the steady-state economy propounded by Herman Daly or in fact degrowth are essential.¹ In the process, some confusion has arisen about what we mean by ‘growth’. More importantly, the debate has skirted the vital questions of what we really want—human well-being and social justice, as well as saving the planet—and how these three societal goals

are interconnected. Though written from the perspective of the Global South, I believe the arguments that follow have a general application.

I. PROBLEMS OF GROWTH

What exactly do we mean by terms like ‘growth’ and ‘steady state’? For Daly, the economy is an expanding subsystem, functioning within a finite eco-sphere; the economy’s growth is measured in terms of its increasing ‘biophysical throughputs’, which threaten to encroach upon the operation of the overall earth system. Daly calls for limits both to population growth and to the depletion of natural resources (fossil fuels, minerals; potentially water, air and soil pollution) to maintain the economic subsystem in a ‘steady state’. Since biophysical throughput is ‘coupled’ with GDP, these limits to quantitative expansion would involve a moratorium on GDP growth, although he argues that this need not jeopardize our quest for well-being, which could come from qualitative development.²

For Pollin, on the other hand, growth means rising GDP—that is, an increase in economic activity. This is inherently desirable because it is causally linked to job creation and higher incomes—and thus, implicitly, to overall well-being. His concern is that climate change threatens ecological disaster: ‘there is a non-trivial possibility that the continuation of life on earth as we know it may be at stake.’³ So he proposes an environmental strategy—a trillion-dollar global investment in clean-energy sectors, a dramatic contraction in fossil-fuel use—focused on reducing carbon emissions by 80 per cent over the next thirty years, as mandated by the IPCC, to ‘stabilize’ the climate in a way that won’t reduce aggregate income and may indeed increase it: his studies suggest clean-energy investment at this scale (1.5 per cent of GDP) will lead to significant job creation. Conversely Pollin opposes degrowth, which he understands as

¹ See Herman Daly, ‘Ecologies of Scale: Interview by Benjamin Kunkel’, NLR 109, Jan–Feb 2018; Troy Vettese, ‘To Freeze the Thames: Natural Geo-Engineering and Biodiversity’, NLR 111, May–Jun 2018; Robert Pollin, ‘De-Growth vs a Green New Deal’, NLR 112, July–Aug 2018; Mark Burton and Peter Somerville, ‘Degrowth: A Defence’, NLR 115, Jan–Feb 2019; Mary Mellor, ‘An Eco-Feminist Proposal: Sufficiency Provisioning and Democratic Money’, NLR 116/7, Mar–Jun 2019. For an overview of the debate, see Lola Seaton, ‘Green Questions’, NLR 115, Jan–Feb 2019.

² Daly, ‘Ecologies of Scale’, pp. 88–92, 101.

³ Pollin, ‘De-Growth vs a Green New Deal’, p. 5.

a contraction of GDP, and which he believes will lead to a deep recession, precipitating mass unemployment, falling living standards and a consequent decrease in well-being. As a double whammy, he estimates that even a GDP contraction of 10 per cent, far deeper than the 2008–09 recession, will only reduce carbon emissions by a tenth, not the 80 per cent required. Pollin's single-minded focus is thus on reducing the throughput of one kind of material—fossil fuel—but in a way that keeps GDP high and growing through green investment.⁴

As with Daly, the main concern of degrowthers Mark Burton and Peter Somerville is material throughput. Growth for them means a relentless quest for resource extraction, consuming not only fossil fuels but water, air, forests, croplands and fishing grounds. They argue that the material footprint of aggregate human activity is currently 1.7 times the earth's biocapacity. Hence, rather than more growth, or even Daly's steady state, they want to see economic activity shrink by some 40 per cent through drastic cuts to industrial production, construction, agriculture (fossil-fuel-dependent monocultures) and distribution (sea, air and road transportation systems). Their explicit target is the Global North, where consumption levels would be severely circumscribed. The contraction of GDP is a necessary consequence of degrowth, but they hope it can be managed equitably: 'in theory', contraction might be limited to the rich, since 'high emissions are strongly correlated with concentrations of wealth and income.' Moreover, if consumption is to be reduced, who needs the higher income? Like Daly, they assume that well-being can be decoupled from income and material consumption, especially in the high-income countries of the Global North.⁵

Examined from a Southern perspective, the relative limitations of each approach become clear. First, as Pollin himself acknowledges, 'development' cannot be reduced to GDP growth, even in developing countries. Furthermore, as many of us have long argued, GDP growth in itself is neither sufficient nor necessary to ensure true development.⁶ Since GDP is an average measure that ignores inequality, it can increase while

⁴ Pollin, 'De-Growth vs a Green New Deal', pp. 8, 17, 21–2.

⁵ Burton and Somerville, 'Degrowth: A Defence', pp. 100, 104, 102.

⁶ See Lele, 'Sustainable Development: A Critical Review', *World Development*, vol. 19, no. 6, 1991, pp. 607–21; Jeroen van den Bergh and Giorgos Kallis, 'Growth, A-Growth or Degrowth to Stay within Planetary Boundaries?', *Journal of Economic Issues*, vol. 46, no. 4, 2014, pp. 909–20.

the poor remain poor—as in Brazil, for example—or be stagnant while the well-being of the poorest rises dramatically, as the Kerala model in India has shown. The goal therefore must always be the enhancement of individual and community well-being, measured by actual physical and social outcomes across the socio-economic spectrum, and not by using average income as a proxy. Pollin’s focus on GDP—and, worse, on continued GDP growth in the Global North—is thus untenable. The moment when well-being decoupled from income has long since passed, and the North is clearly mal-developed and overgrown. GDP growth, whether as an objective in itself or a proxy for development, must be rejected once and for all.

The real question from a developing-country perspective is whether Daly’s goal of a steady-state economy with no growth in material throughput would constrain development too much. The answer is probably: yes, it would. However ‘soft’ or non-material one’s developmental strategy, it is difficult to visualize how the vast population of poor people in the Global South can achieve a modicum of development without some increase in the use of material resources for cooking, housing (including some protection from the heat) and clothing, not to mention education and travel. No doubt, the environmental impact of the 2 or 3 billion global poor moving out of poverty and achieving a ‘decent living standard’ will be small compared to the damage wreaked by present levels of (over)consumption in the Global North.⁷ Nevertheless, a strategy based on a steady state in material throughput is not appropriate at this stage for developing nations as such.

At the same time, a steady state in throughput in the rich world is not going far enough; there, degrowth—or reducing consumption—is the only tenable approach. The typical middle-class citizen in the Global North is consuming at completely unsustainable levels, on multiple fronts: carbon footprint, water use, land despoliation, destruction of biodiversity and so forth. Beyond environmental considerations, many in high-income countries suffer from the physical and psychological maladies of over-development. Reducing their problem solely to a question of excess carbon emissions which can then be solved through a transition to renewables is simply a sleight of hand. In other words, the focus everywhere must be on multi-dimensional well-being. For this, the

⁷ Narasimha Rao and Paul Baer, “‘Decent Living’ Emissions: A Conceptual Framework”, *Sustainability*, vol. 4, no. 4, 2012, pp. 656–81.

South must concentrate not on economic growth but on development to raise its level of well-being, while minimizing its environmental impact. The North must work out what's needed for it to transition to multi-dimensional well-being without further economic growth, while decisively reducing its material throughput.

2. DEFINITIONS OF WELL-BEING

At this point, we need to unpack the idea of well-being. The idea of a steady-state or sustainable economy puts constraints on material throughput, but does not tell us what life in such an economy would be like. Daly touches on this when he says that 'life ought to have some purpose beyond economic growth', and draws a distinction between 'quantitative' growth and 'qualitative' development: something can get better without getting bigger. But his approach to measuring well-being remains largely economicist: the Index of Sustainable Economic Welfare (ISEW) that he and John Cobb put forward in 1989 proposed simply to correct GDP by including unpaid domestic work and deducting 'defensive' expenditure and the depreciation of natural capital caused by environmental harm.⁸

The idea of well-being has come a long way since the appearance of Daly's ISEW, or its still-economicist successor, the Genuine Progress Indicator. Much of the initial thinking came from the development debates in the context of the Global South. At a conceptual level, Manfred Max-Neef's nine fundamental human needs were followed by Amartya Sen's notion of 'development as freedom'.⁹ In terms of metrics, the simplistic Human Development Index—life expectancy, literacy, income—has given way to more complex, multi-dimensional measures, no longer limited to the Global South: the Gross National Happiness Index, the OECD's Better Life Index, the World Happiness Report and the Social Progress Indicator (SPI), based on Sen's idea of development as freedom, which includes basic human needs (nutrition, water, sanitation, shelter, personal safety), foundations of well-being (access to

⁸ Daly, 'Ecologies of Scale', pp. 88–9. See also Herman Daly and John Cobb, *For the Common Good: Redirecting the Economy toward Community, the Environment and a Sustainable Future*, Boston MA 1989.

⁹ Manfred Max-Neef, Antonio Elizalde and Martin Hopenhayn, 'Development and Human Needs', in Ekins and Max-Neef, eds, *Real-Life Economics: Understanding Wealth Creation*, London 1992, pp. 197–213; Amartya Sen, *Development as Freedom*, New York 1999.

knowledge, information, health, environmental quality) and opportunity (individual rights, personal freedom, inclusiveness, access to advanced education). Degrowthers have also embraced the idea that well-being is not about consumption but about enhancing the quality of life through tranquillity, conviviality and rich experience. Clearly, well-being has both material and non-material dimensions.

A detailed discussion of well-being theory is beyond the scope of this article, but two points should be noted. First, Max-Neef and Sen have distinguished between the ultimate forms of well-being (health, affection, understanding, leisure) and the conditions needed to achieve them (clean air for health, for example, or green spaces for leisure), yet many measures of well-being conflate these.¹⁰ For our purposes, it is best to focus on indices of ultimate well-being. Second, many recent conceptualizations of multi-dimensional well-being implicitly include three aspects—individual, social and environmental. This can be confusing. For instance, in the SPI, while nutrition or health can be measured at the individual level, many other indices—political rights, freedom of expression, access to justice, equality of opportunity, non-discrimination on grounds of gender, sexual orientation, class or race/caste—relate to community or social relations. They fall under the broad rubric of an equitable and just society, rather than individual well-being specifically, as they are about how human beings treat each other. Similarly, the SPI includes measures of environmental quality, some of which have a direct bearing on individual well-being (such as air quality, which immediately affects individual health), while others (greenhouse gas emissions, for example) are about future planetary well-being. Similarly, ‘justice’ has often been expanded to include not only intra- and inter-generational justice, but even inter-species and procedural justice. While these ideas are important, they render the term ‘justice’ somewhat unwieldy.

To clarify matters, it may be useful to start from the position that a ‘good society’ has three distinct goals. The first is individual well-being, which has both material and non-material aspects, and is measured in terms of their level of satisfaction in the present. The second is equity, which speaks to intra-generational justice of all kinds. The third is sustainability, which

¹⁰ An egregious example is the Human Development Index, which includes life expectancy—an integral part of a better life—as well as income, which is only a possible means to one.

addresses the temporal dimension—the desire to have non-declining well-being, both for oneself and for future generations.¹¹ A ‘good society’ will aim to ensure all three. However, recognizing that ideas about individual well-being, equity and sustainability will differ among individuals, communities and cultures, we also need to specify what processes will be followed in reconciling different values and interests. Ideas of democratic decision-making, procedural justice and rights of recognition need to be foregrounded as an additional concern.

3. BEYOND SUSTAINABILITY

What is the relationship between the environment and this three-dimensional idea of a ‘good society’? The NLR discussion so far seems to treat environmental concerns as largely synonymous with sustainability. It starts with Daly’s steady state of throughput, intended to ensure sustainable, non-diminishing welfare. This is echoed in Pollin’s focus on carbon emissions as the mother of all environmental problems, one that again threatens *future* (aggregate) economic welfare due to *current* (aggregate) carbon emissions. Burton and Somerville expand the discussion to include the earth’s diminishing assimilative capacities in general, as well as the depletion of resources, but their project is still bounded by ‘ecological sustainability’—that is: our ability to continue to do in future what we are doing today.

This reduction of ‘environmentalism’ to ‘sustainability-ism’ is not new. Originating in renewable-resource management—the ability of a resource to remain as productive in the future as it is today—the term has become a green buzzword, so that ‘being sustainable’ means ‘saving the planet’ in some generalized sense, while ‘unsustainable’ means doing something today that is harming tomorrow. Clearly, the underlying ethical concern is for the future. Admittedly, the term ‘sustainability’ seems to have an appeal that ‘eco-development’ or ‘environmental soundness’ lack. It provides a positive goal and taps into a motherhood-and-apple-pie notion—concern for one’s children and grandchildren. But framing all environmental problems as sustainability issues—or

¹¹ See Lele et al., ‘Framing the Environment’, in Lele et al., eds, *Rethinking Environmentalism: Linking Justice, Sustainability and Diversity*, Cambridge MA 2018, pp. 1–22.

claiming that the entire goal of the environmental movement is to create a sustainable society—sidelines other ethical concerns that have been central to environmental thinking and that are quite distinct from concern for one's future. Two additional, semi-independent dimensions we need to consider are equity or justice, and conservation.

Environmental justice

Concern for equity, or justice, has been central to environmentalism. Many environmental conflicts are rooted in the fact that one person's actions—setting up a factory, building a dam—adversely affect someone else's well-being (health, livelihood) through inter-linked environmental processes: industrial effluents blowing downwind, or flowing downstream; village lands submerged for a dam. If the villagers, or the people living downwind from the factory, have rights to life, livelihood and a clean environment, anything that impinges upon these rights constitutes an environmental or biophysical injustice. If anyone is asked why having to breathe toxic fumes spewed by someone else is wrong, they are likely to say, 'Because it's unfair'—not, 'Because it's unsustainable.'¹²

Similarly, because natural resources are limited—environmentalism's core assumption—their distribution is a zero-sum game, which means their misallocation can be a source of injustice. If the water transported from the dam to an agricultural community is then allocated in proportion to land ownership, ignoring the rights of the landless—or when city water boards supply fee-paying households, while excluding slum-dwellers, or for cultural or historical reasons supply water to one town at the expense of another—it constitutes an issue of resource inequity, or environmental/biophysical injustice. Note that in these cases, the injustice—whether purely environmental or also social—is occurring here and now, not over a future timeframe: it is an intra-generational issue. Note, too, that the scale on which this injustice occurs is often quite localized. Notwithstanding the attempts to cast *all* environmental problems in global terms,¹³ many are actually sub-global in both their proximate causes and their impact.

¹² One could stretch the idea of 'sustainability' to say, for example, of the person dying of respiratory disease that the fumes were 'unsustainable' for them, but this framing is not consistent with commonly held values.

¹³ See, for instance, Johan Rockström et al., 'A Safe Operating Space for Humanity', *Nature*, vol. 461, no. 7,263, 2009, pp. 472–5.

I use the term ‘environmental injustice’ here in a somewhat different sense to that popularized by Robert Bullard’s *Dumping in Dixie*. What I am calling environmental or biophysical injustice refers simply to the unfair impacts of an environmental process, without reference to the social status of the polluter, or pollutee. Bullard’s pioneering work pointed out that there is almost always an additional layer of unfairness in cases of environmental injustice—what I would call ‘social injustice’—in that pollutees tend to be socially marginalized communities. Without denying that social justice often correlates with biophysical injustice, I suggest it is more useful to keep the two analytically distinct, so as to clarify the source of the inequity.¹⁴

Of course, many environmental problems have both spatial and temporal dimensions. Climate change is a classic example. Although typically framed in Garrett Hardin’s terms as a tragedy of the commons—or, more precisely, of open access to the global commons—climate change involves serious temporal and spatial asymmetries. The temporal question is well recognized—today’s emissions affect the climate over hundreds of years—hence the prevailing framing of climate change as a global-sustainability problem. But, as Anil Agarwal and Sunita Narain pointed out, there are multiple spatial asymmetries as well.¹⁵ The CO₂ that has accumulated in the global atmosphere so far has been largely the product of post-1850 emissions by the North—emissions that underpinned the prosperity it currently enjoys.¹⁶ Moreover, per capita emissions in the North are still five to ten times higher than those in the Global South. Even holding the South solely responsible for its population growth and so discounting this growth from per capita statistics—by using, say, 1990 population figures in the denominator—does not significantly change this inequity. Finally, the impacts of global warming are going to be felt more in the South, starting with the island states and monsoonal sub-tropics, than in many temperate countries; tundra-bound Canada or Russia may even welcome rising

¹⁴ Robert Bullard, *Dumping in Dixie: Race, Class and Environmental Quality*, Boulder CO 1990; and Lele, ‘Sustainable Development Goal 6: Watering Down Justice Concerns’, *WIREs Water*, vol. 4, no. 4, 2017.

¹⁵ Anil Agarwal and Sunita Narain, ‘Global Warming in an Unequal World: A Case of Environmental Colonialism’, Centre for Science and Environment, New Delhi 1991.

¹⁶ Even today, a large fraction of China’s emissions should actually be ‘debited’ to the Global North, because China is producing goods for satiating the appetites of Northern consumers.

temperatures. Add to this the social (in)justice component—that the capacity to take adaptive action is severely limited in poor countries—and one can see why most in the South talk of climate as a justice issue. Stepping back from parochial positions, North or South, one would say that climate change is simultaneously an environmental-sustainability and an environmental-justice question.¹⁷

This points again to the problems of the ‘equitable green growth’ position, which models aggregate emissions and aims for an ‘under 2°C world’ without foregrounding the distribution of benefits and costs. Global models of energy use and climate change typically ‘grandfather in’ the existing, asymmetrical pattern of energy use and emissions, and then speak of aggregate reductions towards some climate-stabilization goal. The 2015 Paris Accord effectively ratified this highly inequitable approach by leaving it to each country to set its own mitigation targets; the US aggravated the injustice by pulling out of even this. At the end of his piece, Pollin acknowledges that even the transition to clean energy that he proposes will end with the average US citizen emitting five times more carbon than their counterpart in India, and recognizes the gross injustice of this. But he rejects any practical possibility of equalizing emissions globally, and argues that the only feasible way of introducing an element of fairness would be to require the US to provide large-scale financial assistance to poorer countries to effect their own transition to clean energy.¹⁸ The willingness to sacrifice concern for justice on the altar of ‘global climate sustainability’ has been a hallmark of green growth thinking; what is more surprising from a Southern perspective is that Pollin calls his strategy ‘egalitarian green growth’.

A tunnel-vision approach in which CO₂ becomes the only focus risks imposing other environmental injustices.¹⁹ For instance, Pollin talks of supplementing solar and wind energy with hydropower, just when the environmental movement thought it had finally won the battle, with the World Commission on Dams Report (2000) exposing the devastating

¹⁷ John Byrne, Young-Doo Wang, Hoesung Lee and Jong-dall Kim, ‘An Equity- and Sustainability-Based Policy Response to Global Climate Change’, *Energy Policy*, vol. 26, no. 4, 1998, pp. 335–43.

¹⁸ Pollin, ‘De-Growth vs a Green New Deal’, p. 21. This suggestion seems at least as politically ‘unrealistic’ as asking for equitable emission reductions.

¹⁹ Navroz Dubash, ‘Environmentalism in the Age of Climate Change’, *Seminar*, vol. 601, 2009, pp. 63–6.

socio-environmental impact of dams, especially in the Global South. Indeed, the Indian government has seized on the opportunity presented by climate change to justify its incredibly destructive and risky large dams in the north-east in the name of ‘clean energy’. In its extreme form, carbon-centric environmentalism offers *carte blanche* to the nuclear-energy industry.²⁰

A similar tunnel vision afflicts calls to solve the climate problem through reforestation, as in Vettese’s NLR contribution. Again, the focus on reducing global CO₂ concentrations means grandfathering in current emission patterns, and ignores the fact that large-scale afforestation can impose high costs on forest- and grassland-dependent communities in the densely populated and not-yet-industrialized South. Our analysis shows that the Modi government’s Paris Accord commitment to sequester 2.5–3 billion tonnes of CO₂eq in India’s forests can only be achieved by reversing the recent achievements in decentralized governance, restoring power to the neo-colonial forest departments and significantly damaging livelihoods.²¹ Vettese uncritically supports a particularly egregious afforestation-based solution, E. O. Wilson’s ‘half earthing’, which attempts to address climate and biodiversity concerns simultaneously. Unsurprisingly, the ‘half’ of the earth to be put under ‘protection’ happens to be largely in the Global South, which has led to heavy criticism of the proposal as both unjust and ineffective.²²

The ends of conservation

When Rachel Carson’s *Silent Spring* drew attention to the connection between DDT and the decline of the bald eagle, was she thinking about the future of humankind or that of these iconic birds? What motivates campaigns to save the tiger, the whale or the butterfly? At root, the desire to preserve beautiful biota seems to stem from a spiritual or aesthetic concern (biodiversity campaigners typically do not fight for the preservation

²⁰ M. V. Ramana, ‘Second Life or Half-Life? The Contested Future of Nuclear Power’, in Thijs van de Graaf et al., eds, *The Palgrave Handbook of the International Political Economy of Energy*, London 2016, pp. 363–96.

²¹ Navroz Dubash, Radhika Khosla, Ulka Kelkar and Lele, ‘India and Climate Change: Evolving Ideas and Increasing Policy Engagement’, *Annual Review of Environment and Resources*, vol. 43, no. 1, 2018, pp. 395–424.

²² Vettese, ‘To Freeze the Thames’, pp. 65–7. See also Bram Büscher et al., ‘Half-Earth or Whole Earth? Radical Ideas for Conservation and their Implications’, *Oryx*, vol. 51, no. 3, 2016, pp. 407–10.

of rare pathogens or endangered viruses).²³ Some argue that human beings have an inherent 'biophilia', others that biota endow a sense of 'place' or 'relational value'; a more radical position accords nature the 'right' to exist independently of human well-being.²⁴ Animal-rights campaigners have raised the question of inter-species justice—the ethical imperative that we treat all sentient beings with respect. Conservation, then, may involve a combination of (spiritual) well-being and justice. Even the notion of preserving wildlife for future generations to enjoy is only meaningful if we care about these living things ourselves.

Yet as with sustainability, an exclusive focus on biodiversity can obscure questions of human, intra-generational justice.²⁵ The half-earth example illustrates this tension. By contending that biodiversity loss has reached a 'global tipping point', half-earth ecologists forget that the greatest loss of wild habitats has been in the developed North; moreover, framing biodiversity loss as a 'global' phenomenon, akin to climate change, is incorrect in that loss of biota in one place may not materially affect people elsewhere. Those advocating that 'half the earth' should be reserved as wilderness fail to consider the privileged position from which this solution emerges: to enjoy biodiversity in this way first requires the ecotourist to be living in a domesticated environment, enjoying a privileged lifestyle that is actually harmful to both climate and wilderness.

In short, environmentalism speaks to all dimensions of well-being: material and spiritual, individual and distributive, present and future. The environmental aspect has to do with the role of biophysical processes, whether in providing materials for food, shelter and clothing, or in furnishing the conditions for non-material well-being, such as

²³ The concept of 'ecosystem services' focuses on the material benefits, direct and indirect, resulting from the conservation of natural ecosystems. Its critics charge it with aiming at a 'commodification of nature'. See Kathleen McAfee, 'Selling Nature to Save It? Biodiversity and Green Developmentalism', *Environment and Planning D: Society and Space*, vol. 17, no. 2, 1999, pp. 133–54.

²⁴ Stephen R. Kellert and E. O. Wilson, *The Biophilia Hypothesis*, Washington DC 1995; Madhav Gadgil, 'Why Conserve Living Diversity?', *The Hindu*, March 29 1998, pp. 6–7; Kai M. A. Chan et al., 'Why Protect Nature? Rethinking Values and the Environment', *Proceedings of the National Academy of Sciences*, vol. 113, no. 6, 2016, pp. 1,462–5. For a critique, see Hayward, *Political Theory and Ecological Values*, New York 1998.

²⁵ See Ramachandra Guha, 'Radical American Environmentalism and Wilderness Preservation: A Third World Critique', *Environmental Ethics*, vol. 11, no. 1, 1989, pp. 71–83 for an early critique of uni-dimensional 'deep ecology' thinking.

green surroundings or wildlife; or in linking upstream polluters with downstream pollutees in a river basin, or connecting current generations to future ones through climate change or resource depletion. ‘Sustainability’ does not capture these diverse concerns, while calling them ‘extra-ecological’, as Seaton does, is part of a long history of misleading compartmentalization: ‘sustainability’ or ‘conservation’ as the environmental question; ‘justice’, whether distributive or procedural, as the social question; and ‘productivity’ or ‘efficiency’ as the developmental question.²⁶ We need to frame the definition of a good society in more inclusive and inter-connected terms.

Not climate alone

Mis-framing the climate crisis as solely a matter of global sustainability is one part of the problem; framing it as the ‘only’ environmental crisis, or as the ‘mother’ of all ecological problems, is the other part. Many environmental problems pre-date the climate crisis and continue to threaten current and future well-being across the world, especially in the South. Water scarcity, for example, is arguably a more urgent problem in India and many other countries in the South than the risks posed by climate change.²⁷ Indiscriminate groundwater pumping has already exhausted aquifers in peninsular India and some of its northern regions, while the ill-considered construction of dams and promotion of surface irrigation has resulted in declining river flows—especially baseflows, which are critical to aquatic life—and aggravated upstream-downstream conflicts. Lack of clean drinking water and sanitation is a major driver of ill-health in the subcontinent. Yet the link between the water crisis and climate change is tenuous, while water pollution has more to do with sewage management and lax enforcement than with rising global temperatures.²⁸

Countries in the Global North have ‘solved’ many of their local environmental problems, partly by exporting their production to China and their waste to Africa, but partly also by building strong environmental

²⁶ Seaton, ‘Green Questions’, pp. 110–11.

²⁷ Veena Srinivasan et al., ‘The Nature and Causes of the Global Water Crisis: Syndromes from a Meta-Analysis of Coupled Human-Water Studies’, *Water Resources Research*, vol. 48, no. 10, 2012.

²⁸ Lele et al., ‘Why Is the Arkavathy River Drying? A Multiple-Hypothesis Approach in a Data-Scarce Region’, *Hydrology and Earth System Sciences*, vol. 19, no. 4, 2015, pp. 1,905–17.

movements in the 1970s. For many in the North, climate change—which seemed to come out of nowhere, laying bare their continuing vulnerability—became *the* environmental crisis. But many communities in the South are already ‘vulnered’: freed only a few generations ago from colonial exploitation, they are struggling with the double blow of crushing poverty and regional environmental problems. Maybe climate change will aggravate these, but given their small carbon footprint *vis-à-vis* the North, what sense does it make for them to engage in discussions about reducing their emissions, or indeed their ‘material throughput’ as a whole to achieve a steady-state economy? And what sense does it make to focus exclusively on climate-change adaptation when farmers are committing suicide by the thousands, a million deaths per year are attributed to air pollution, millions of families spend arduous hours each day collecting water for their domestic needs, and many more lose their livelihoods as their land is taken by mining, dams and other ‘development’ projects?

There is an analogy here with the questions being raised about the importance attributed to COVID-19—a disease that came to India through international travellers, and hit the upper classes before percolating to the poor—compared to, say, tuberculosis, which continues to kill more than 300,000 Indians every year. From where I sit, we cannot think of ‘unsustainability’ as the only problem, climate change as its only cause—and renewables as the only solution. We need consistently to frame the problem as an integrated, multi-dimensional environment-cum-development crisis. Climate mitigation and adaptation must come as a ‘co-benefit’ of policies that promote locally and regionally sustainable and equitable development.²⁹

4. IDENTIFYING THE PROBLEM

To develop strategies to tackle this environment-development crisis, we must first ask ‘why’. What are the causes of under-development in the South and mal-development in the North—characterized by low levels of well-being and high levels of inequality and environmental injustice, undermining our individual and collective future? The answers are of

²⁹ Navroz Dubash, D. Raghunandan, Girish Sant and Ashok Sreenivas, ‘Indian Climate Change Policy: Exploring a Co-Benefits Based Approach’, *Economic and Political Weekly*, 1 June 2013.

course complex, and there is space here to discuss only a few of the aspects raised in the debate so far: capitalism, power relations, technology, fossil fuels—and values.

First, it's worth recalling the NLR contributors' responses to this 'why', which focused on population growth (Daly) and consumption (Daly, Vettese, Burton and Somerville) as the proximate drivers of climate change, and technology (Pollin) or lifestyle changes (Vettese) as possible solutions. This is reminiscent of the Ehrlichs' formula from the 1970s, which sees environmental impact (I) as the product of population (P), affluence/consumption (A) and technology/efficiency (T)—summarized as 'I=PAT'.³⁰ Part of the problem with this equation is that it suggests that population, affluence and technology are causal variables, each capable of driving environmental impact. For those located in the Global North, it may appear that 'the decision about how many children to have' is being taken by individuals. In the Global South, however, the vast majority have no such agency; high fertility rates are closely linked to poverty, gender discrimination and poor provision of healthcare, education and social welfare.³¹ Population growth is best understood not simply as a cause of environmental damage, but as a symptom of deeper societal pressures. We therefore need to examine the ultimate drivers of poverty, over-consumption and resource depletion.

Capitalism is clearly one of the ultimate drivers. Capitalism not only allows for profit to accrue through private ownership of capital, but obliges owners of capital to actively pursue returns in competition with each other. This imperative requires the economy to be constantly growing, meaning consumption must continually increase too, even—or perhaps especially—in countries that are already affluent. Previous contributors have examined the role played by capitalism 'writ large'—'financialized monopoly capitalism, geared towards continuous growth and concentration of income', as Daly put it.³² To this I would add that as a form of social relationship, the capitalist system is based, *inter alia*, on legitimizing the conversion of 'savings'—accumulated labour value—into 'capital' on which one expects to earn returns. This makes all of

³⁰ See Paul R. Ehrlich, Anne H. Ehrlich and John P. Holdren, *Ecoscience: Population, Resources, Environment*, San Francisco 1977.

³¹ See, for example, Lourdes Arizpe, M. Priscilla Stone and David C. Major, eds, *Population and Environment: Rethinking the Debate*, New York 2019.

³² Daly, 'Ecologies of Scale', p. 96.

us who have money in the bank (which is being lent out to earn interest) and who invest in mutual funds (which invest in companies to earn returns) complicit in capitalism. So to break down the system, we will for starters have to give up any expectation of ‘earnings’ from our savings, and ask all bankers to do the same. This tiny step would itself require a revolution in our way of thinking.

But capitalism is not the only explanation; other ‘semi-independent’ factors are at work.³³ Looming large from a Global South perspective is colonialism’s role in enabling accumulation in the North and perpetuating poverty in the South; neo-colonialism, in the form of disadvantageous terms of trade, continues today. Moreover, many post-colonial states have oscillated between outright dictatorships and pseudo-democracies (as recent events show, the Global North may be heading in the same direction). The ‘state’ in most Southern countries is looked upon with deep suspicion, as more likely to perpetuate colonial injustices and indulge in crony capitalism than ameliorate the lot of the poor. This combination of colonialism, neo-colonialism and internal colonialism needs to be kept in mind as semi-independent from capitalism. Likewise, there are other oppressive social structures that cause inequalities of power—racism, caste-ism, patriarchy—which often lead to environmental injustice. While colonialism can be seen as an extension of capitalism, and racism has clearly been intertwined with both at various points, forms of discrimination based on race, caste and gender existed long before modern-day capitalism took shape and must as such be recognized as semi-independent factors.

The only way to counter these systems is by deepening both the idea and the structures of democracy. But as the case of India shows, the scale of the task should not be underestimated. Even as India proudly proclaims itself the world’s most populous democracy, the quality of the inherited ‘Westminster model’ leaves much to be desired and is eroding further as we speak. Nor can undemocratic functioning be attributed simply to capitalist manipulation. India’s power structures retain many vestiges of colonial rule which strengthen the power of the state against the common citizen. For a country more than twice as populous as Europe,

³³ I use the term ‘semi-independent’ to acknowledge the significant interplay and often mutual reinforcement between different ‘ultimate’ factors. See Lele, ‘Rethinking Sustainable Development’, *Current History*, vol. 112, no. 757, 2013, pp. 311–16.

and four times more so than the US, there are effectively no tiers of reliably democratic government below the level of the provinces, which in many cases are the size of a large European nation. Undemocratic decision-making is not just the product of capitalism but is rooted in other histories and practices—the traditions of social discrimination mentioned above, but also the absence of a deep-rooted belief in the democratic process (beyond elections) and in the ideas of transparency and accountability that go with it. Undemocratic government therefore needs to be addressed semi-independently of capitalism.

Third, (reductionist) science and (inappropriate) technology are further drivers of environmental degradation that need to be seen as semi-independent factors in themselves. The industrial revolution marked a sea change in our understanding of nature—and in our ability to manipulate it. For the first time, we were able to convert fossil energy into mechanical, and later electrical, power. Subsequently, there were the revolutions in chemistry (including the development of DDT), microbiology (including antibiotics), nuclear power and, most recently, information technology and genetics. This dramatic expansion in our capacity to manipulate nature has not been matched by an expanded understanding of the ‘external’ effects of such manipulation: how DDT might accumulate in the food web; the waste-management risks associated with nuclear energy; the socio-cultural and psychological effects of IT use. In some instances, prescient warnings were ignored: the Swedish climate scientist Svante Arrhenius predicted in 1896 that the burning of fossil fuels would cause the earth’s temperature to rise. In most other cases, the environmental and health effects of our inventions were discovered long after the fact. Carson’s work on DDT, for example, points to the absence of any preliminary testing for the ecological consequences of introducing such a powerful chemical into the environment—thoughtlessness that stemmed in part from a reductionist postwar technological triumphalism. Though the corporate manufacturers of DDT naturally spent large sums trying to discredit Carson’s revelations, the problem cannot be said to have originated in capitalism.

Nuclear power provides a comparable case. In India, as in many other countries, the nuclear-energy sector is completely state-owned. Its champions have been scientists, motivated by fame or national pride, and driven by their faith in technological solutions and their arrogance in being set above rigorous public scrutiny of their budgets or of the

harm that uranium mining is doing to indigenous communities in India's hinterland. Once formed in this mode of thinking, no amount of data on birth defects or the costs of radioactive-waste disposal will shake their faith in nuclear technology. The role of private capital in this story is minimal.

Or again, take the exploitation of water. Until the 1970s, groundwater in India was basically open-well water, consumed largely for domestic use. The advent of borewell-drilling technology led to a 'revolution', and India is today by far the world's largest consumer of groundwater, mostly for irrigation. Consequently, large parts of the country are now seeing declining water tables. Almost all the innovation and scientific research has concentrated on 'developing' this resource—new means for detecting groundwater reserves, estimating (immediate) yields and pumping from greater depths. Very little attention, either in India or globally, has been paid to understanding where it comes from—crudely speaking: is it fossil groundwater, or annually recharged?—and where it goes—how much actually flows into rivers or oceans?—or to how we can measure its movement, monitor its consumption and so on.

But the blame for this lopsided scientific development can hardly be laid at the door of capitalism. Most of the initial prospecting and drilling was publicly funded, and though the drill and pump manufacturers are capitalist firms with vested interests, the impetus to drill and pump ultimately comes from the individual farmer trying to grow a more profitable crop or an individual household trying to secure its water supply—under market conditions, of course; but the market economy in food existed long before industrial capitalism came into being. There is an interesting parallel between the over-exploitation of fossil fuels and that of groundwater in India: groundwater began to be exploited because a technology was developed that gave us access not only to its renewable, but its non-renewable (fossil) component. As with fossil fuel, the immediate gains far outweighed the long-term costs, and as a society, we were not able to put institutional arrangements in place rapidly enough to prevent us from undermining our future.

There is indeed a fundamental relationship between technological change and industrial capitalism. All economic systems are about who controls the surplus value left over from the production process once the elementary needs of the labourers have been met. Fossil energy

dramatically increased the quantum of surplus. Once unleashed by technologies of conversion into mechanical and electrical power, this concentrated energy source was so cheap that one could scale up production without significantly increasing labour input—shifting from hand looms to power looms, in the classic example. As the technological revolution penetrated beyond energy generation and thermodynamics into the fields discussed above (metallurgy, biochemistry, microbiology, genetics, IT), it generated an ever-greater surplus, creating in the process an illusion of unlimited technological possibilism. Of course, social relations of production had to legitimize the appropriation of this surplus by the owners of the means of production rather than, say, by the whole community. But the availability of cheap fossil energy is what made it possible.³⁴

Few societies could anticipate the implications of this huge surplus and establish institutional arrangements to absorb it more equitably. For most, the upshot was—Marx would say, inevitably—industrial capitalism. But nobody, capitalist or communist, paid much attention until about the 1970s to whether the fossil resource that was powering much of this technological revolution would run out, or—Arrhenius notwithstanding—to whether its use might adversely affect the environment. One cannot blame capitalism for what appears to be a ‘normal’ human response—refusing to look a technological gift horse in its mouth. We see this with fossil fuels and, at a smaller scale, with groundwater.

It may be more accurate to say that industrial capitalism co-evolved with fossil fuel and other technologies: while the initial surplus came from coal, capitalism drove innovation towards harnessing other fuels—liquification of natural gas, off-shore oil rigs, fracking—and ‘post-industrial’ technologies; in the process, capitalism itself has changed, as the IT revolution allows finance to move at speeds unimaginable a couple of decades ago. This co-evolution means that we need to address, not capitalism alone, but the nature of the surplus that fossil fuels help to generate and the best approach to it. Should we splurge it all now, on the assumption that we will always find another source of cheap energy somewhere, or use it sparingly in the North, to enable the

³⁴ For a detailed, if perhaps exaggerated, argument about the energy-economy linkage, see Mansoor Khan, *The Third Curve: The End of Growth as We Know It*, Mumbai 2013.

South to raise its standard of living, while also preserving most of it as a buffer for future generations? We need to engage in a similar fashion with the other mixed blessings unleashed by modern technologies—biological, nuclear, IT: insisting upon much greater democratic control over the innovation process than capitalism and technological hubris has hitherto allowed.

The place of values

This brings us to the question of values. Even if capitalism aggravates our predilection to consume, we cannot explain all consumption as a consequence of capitalism. It is a fundamental part of human nature to want an easier life and to be rid of drudgery—initially, by exploiting slaves and coerced labour, liberally used by the Global North under colonialism. If the overthrow of slavery was in good part a result of revolts by the exploited themselves, it also involved a broader recognition that slavery was inhuman, its practice a matter of guilt, to be condemned. Unless those who revolted acknowledged a higher principle than their own self-interest, they would likely go on to become slave-owners themselves. Similarly, to pay for saving tigers through payments-for-ecosystem-services schemes, we must care about wildlife. To lobby for public transport in the teeth of pressure from the car industry, we must first care about future generations and then know something about the impact of fossil-fuel consumption on their lives. To generate technologies that are socially useful, we must first understand and internalize ideas of social usefulness, not deify curiosity and inventiveness for their own sakes. To stop a factory polluting a river, we need a sense of environmental justice—and, ideally, we need the polluter to share it, too.

The multi-dimensional crisis we face requires changing values on multiple fronts: our ideas of well-being (unlimited material wealth or subsistence, affection and freedom?), of fairness, and how we view and value nature or non-human life-forms. We also need an ethics of ‘process’ to govern the inevitable trade-offs between stakeholders with different values and interests. Moreover, many of the ‘solutions’ to the crisis are plagued with uncertainty, so decision-making needs to be open and accountable. But how to set about changing values, if we are largely socialized into them? Constantly bombarded by messages glorifying consumerism, violence and competition, how do we embrace frugality, peace and cooperation without changing the structures responsible

for the bombardment? Many educationists have argued that change begins in the individual and then adds up to the aggregate. Historically, transformations in values were often brought about by charismatic religious leaders. Today, the change must come about in a more horizontal, dispersed fashion, and education offers one of the possible routes.³⁵ Other approaches—persuasion through public debate, learning by doing or practical action—need to be explored as well. As critics of the voluntary simplicity movement have argued, the point is not to stop at individual change but to begin there and then organize ‘outwards’.³⁶ Structural change will not follow automatically; it will have to be fought for. The point is to keep alive the process of constant reflection on one’s own values in the course of struggle and organization, to see how they are influenced by our actions and by the new structures we create. In Gandhi’s words, ‘there cannot be a system so good that the individuals in it need not be good’.

5. UTOPIAS, NOT PRAGMATICS

What then of strategies? I do not propose any panaceas here. Looking for pragmatist solutions, as Pollin does, forces us into a narrowed framing of the problem: one value (sustaining future generations), one problem (climate change), one goal (reduce carbon emissions) and one solution (renewables).³⁷ Once we open out the debate to include not only sustainability but justice, well-being, conservation and democratic processes, it becomes impossible to think in terms of simple strategies or single-technology solutions. We need to think of strategies that are, as Seaton says, not pragmatic but utopian³⁸—because the pragmatic is a seductive pathway to the status quo. These strategies will necessarily be partial, addressing multiple levels from multiple directions.

³⁵ ‘The goal of education is not mastery of subject matter, but of one’s person’: David Orr, ‘What Is Education For?’, *In Context*, vol. 27, 1991, pp. 52–5.

³⁶ See Ken Conca, Thomas Princen and Michael Maniates, eds, *Confronting Consumption*, Cambridge MA 2002, especially the chapter by Maniates.

³⁷ Doubts have also been raised about the technical feasibility of the type of energy transition Pollin proposes. See, for example, Ted Trainer, ‘Can Renewables Meet Total Australian Energy Demand? A “Disaggregated” Approach’, *Energy Policy*, vol. 109, 2017; and Vaclav Smil, ‘A Global Transition to Renewable Energy Will Take Many Decades’, *Scientific American*, vol. 310, no. 1, January 2014.

³⁸ Seaton, ‘Green Questions’, pp. 126ff.

First, we need a shift in our thinking. We have to counter the hold on our collective minds of economic growth-ism, technological hubris and Adam Smith's idea of individual self-interest automatically leading to societal good. We must reject established hierarchies of thinking, in which economists and engineers rule the roost, social scientists are in a sorry second place, and the humanities are nowhere in the picture.³⁹ We must reopen the question of values, asking what we mean by a good society and making the case for why we should care about our fellow humans, future generations and the natural world. Our analyses must be equally multi-dimensional, avoiding the trap of mono-causality, or trying to explain everything through Marxism, feminism, or some other system. It is vital to bridge the structure–agency divide, to explore how our actions in production, consumption and the deployment of our 'savings' implicate us in the very system we are struggling against.

Second, we need concrete structural changes. On the economic front, while universal basic income may be a starting point, the end-goal must be transferring ownership of productive assets. There are real opportunities for this in the Global South, not least in devolving control of state-owned forests to local communities—Nepal took a big leap in the early 1990s, and India is moving in the same direction through its landmark Forest Rights Act.⁴⁰ These shifts combine a transfer of control over the means of production with a democratization of environmental decision-making, as local communities get a say on development projects such as mines and dams. This could be made into a stepping-stone towards co-design and co-ownership of those projects. Simultaneously, COVID-19 has reopened the discussion on progressive taxation, if only to generate resources to fight the pandemic. Instead of falling prey to the rhetoric of needing 'financial packages to restart the economy', we should be asking, 'how can we shape a different economy?'

On the political front, the battle is clearly to create deeper democratic processes and to align them with environmental problems. Fully participatory democracy may be a far cry, but the principle of environmental and social subsidiarity—that is, to federate upwards only those functions that cannot be discharged at a lower level—could help to strengthen

³⁹ Manfred Max-Neef's pyramid of disciplines is illuminating in this regard: Max-Neef, 'Foundations of Transdisciplinarity', *Ecological Economics*, vol. 53, no. 1, 2005.

⁴⁰ See the special section on the Forest Rights Act in *Economic and Political Weekly*, 24 June 2017.

transparency and accountability. Democratization must include public oversight of science and technology, but we also need to educate our scientists and engineers in ethics and sociology, to help them understand the challenges we face on the socio-environmental front and to hold them accountable for their actions.

Education will be essential to all the proposals discussed above. The purpose of education is not an instrumentalist 'skilling' to produce bidable masses for current economic and political systems to exploit. Its purpose is transformative: to imbue everyone with broad human values and critical thinking abilities. Only then can we overcome the confines of race, caste, gender and other prejudices, reconnect with our environments and become politically aware and active citizens. The glimpse of Mount Everest from Bihar is likely to be ephemeral, as the power plants in the region resume full operations after lockdown, burning coal mined by backbreaking labour, in pits that ravage the surrounding forests of indigenous peoples, in order to feed the appetites of consumers in the urban centres of India and the world. But with new thinking on the environment-development conundrum, with concepts like *buen vivir* and *vikalp sangam*⁴¹ on which to ground new coalitions, we can hope to glimpse a better future for humanity and nature alike.

⁴¹ See Ashish Kothari on 'Radical Ecological Democracy' and other essays in Julien-Francois Gerber and Rajeswari Raina, eds, *Post-Growth Thinking in India: Towards Sustainable Egalitarian Alternatives*, New Delhi 2018.



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THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW

Abstract. A firm is not a black box with a pipe sticking out of it. Firm managers make decisions with environmental consequences long before pollution comes out of a pipe or a smokestack. Corporate law governs how firms are created and the duties their managers owe to firm stakeholders. Securities regulations govern the information that firms must share with investors. Antitrust law governs how firms behave in the marketplace with respect to competitors and customers. And bankruptcy law governs how firms wind down or are reorganized when they face financial trouble. Each of these fields of positive law governing the firm has significant implications for firm behavior with respect to the environment. Yet they are not ordinarily considered part of the environmental law toolkit. To address fully the most pressing environmental problems of our time, including issues of cumulative harm like climate change, environmental law should embrace these nontraditional levers that are central to its enterprise. This Article sounds a clarion call: The law of the corporation is environmental law.

Table of Contents

Introduction	139
I. The Generations of Environmental Law	150
A. The Traditional Generations	150
B. Moving Beyond the Traditional Narrative	153
C. A Heterogeneous Regulatory Toolkit	155
D. What Is Missing	158
II. The Forms of Interaction	160
III. Corporate and Business Law as Environmental Law	165
A. Mandates	165
1. Securities disclosures	165
2. Antitrust law	171
B. Prohibitions and Disincentives: The Antitrust Per Se Rule and the Rule of Reason	176
C. Safe Harbors: The Business Judgment Rule	181
D. Incentives: The Benefit Corporation	185
E. Disincentives: Bankruptcy Law	190
IV. A Holistic Approach	200
A. The Environmental Priority Principle	201
B. Integrating the Principle into Law	206
C. Regulatory Pluralism in a Deregulatory Context	212
Conclusion	213

*139 Introduction

The corporation is ascendant. Firms are not merely the objects of activist boycotts.¹ They are becoming activists themselves. Private firms are increasingly participating in public discourse² to pursue social or

environmental values and goals.³ For example, the outdoor retailer Patagonia recently filed suit to challenge the federal government's decision to shrink the Bears Ears and Grand Staircase-Escalante National Monuments in Utah.⁴ Many private firms have adopted different forms of private environmental governance to improve their environmental footprints, going beyond mere compliance with rules of traditional environmental law.⁵ To be sure, while such environmental or social action is arguably voluntary, the legal environment in which firms operate sets the boundaries of what firm managers may do, what they must do, what they have incentives to do, what they have incentives not to do, and what they are prohibited from doing.⁶

Traditionally, environmental law scholarship has focused on a set of canonical federal statutes adopted or amended by Congress between 1970 and 1990⁷ as the heart of the positive law⁸ that shapes firm behavior by addressing environmental externalities.⁹ This focus is consistent with the view that there is (and ought to be) a division of labor between firms and markets on the one hand, and public environmental law and regulation on the other. In other words, firms maximize their value within markets that are designed to promote efficient competition, while the government, through public environmental law, should address any negative externalities associated with market production.¹⁰

This Article questions this division of labor and argues that the field of environmental law should embrace a broader set of legal doctrines that are critical to its enterprise. In light of the significant impact that firms can have on the environment (often, though not always, when they are organized as publicly traded corporations), this Article argues that the law governing the corporation throughout its life cycle--corporate law, securities regulation, antitrust law, and bankruptcy law--should be understood as a fundamental part of environmental law. Firm managers make decisions with profound environmental consequences long before pollution comes out of a pipe or smokestack as an externality.¹¹ Corporate law governs how firms are created and the duties that managers owe to firms' different constituencies.¹² Securities law governs the information that firms must disclose to investors.¹³ Antitrust law governs how firms behave in the marketplace with respect to their competitors and to consumers.¹⁴ Bankruptcy law governs how firms wind down or reorganize when faced with financial trouble, as well as their ability to discharge their pre-petition legal obligations.¹⁵ These fields of law have significant implications not only for whether firms comply in full with public environmental law, but also for whether they go beyond compliance to exhibit environmental leadership through private environmental governance. A broader and more pluralistic understanding of environmental law that includes these fields governing corporate decisionmaking and market architecture can yield solutions to enduring problems that traditional federal environmental law has been unable to solve on its own.

In focusing on fields of law governing the corporation throughout its life cycle, this Article builds on and extends beyond a body of work by scholars who have observed how environmental values and goals have permeated, or been embedded expressly within, areas of positive law outside of the traditional environmental law statutes, such as tax law, property law, administrative law, and civil rights law, among others.¹⁶ It likewise builds on work by many scholars who have sought to expand our understanding of environmental law to incorporate a more nuanced view of the firm's role as a regulator or coparticipant in regulation with public institutions.¹⁷ In my own prior work, I have argued that environmental regulatory programs can be fragmented across institutions beyond the Environmental Protection Agency (EPA).¹⁸ Such institutions include federal agencies that have primary missions other than to promote environmental values; state and local governments; and private institutions like firms, nongovernmental organizations (NGOs), and industry associations. Yet to date, even this scholarship on environmentalism beyond environmental law has not offered an in-depth, holistic analysis of the positive law governing the corporation throughout its life cycle as a form of environmental law.¹⁹

***143** To the extent that scholars have examined the connection between any one of these fields of corporate or business law²⁰ and the environment, they have tended to focus on each field in a siloed fashion--what

Judge Frank Easterbrook would call a “law and” approach.²¹ For example, many scholars of corporate law have examined the social responsibility of firms under principles of corporate law, including their environmental responsibility.²² *144 Several environmental law scholars have discussed the implications of specific U.S. Supreme Court cases or legal doctrines at the intersection of environmental law and individual fields such as bankruptcy law or corporate law.²³ A few scholars have examined the limiting implications of antitrust law for private industry collective action with respect to common pool resources.²⁴ Others have examined environmental disclosure requirements under securities regulations.²⁵ A robust discussion on the relationship between the firm and the *145 environment has developed within management and business ethics scholarship about the duties that firm managers owe to different stakeholders to protect the environment, and the institutional differences that influence firms' environmental decisionmaking.²⁶

This Article advances the discussion by viewing these fields of corporate and business law together as a single phenomenon with significant implications for firms' environmental decisionmaking. Unifying these otherwise disparate legal doctrines into a single constellation yields four insights.

*146 First, a unified approach yields a comprehensive analytical framework for understanding how these disparate fields coalesce into five primary categories of influence on firms' environmental decisionmaking. Law governing the corporation can create mandates, incentives, safe harbors, disincentives, or prohibitions on environmentally positive firm behavior. A siloed approach can fail to appreciate the bigger-picture story about how these levers work in harmony with or in opposition to one another. Manipulating a single lever--for example, whether securities regulations require firms to disclose to investors those climate risks that are environmentally, but not financially, material to the firm--might be necessary, but not sufficient, to induce firm managers to prioritize environmental values and goals more explicitly in their decisionmaking. A failure to address simultaneously the tension between bankruptcy law's principle of giving debtors a “fresh start” and environmental law's “polluter pays” principle, or the antitrust implications of participating in private standard setting, may minimize or undermine the value of a single legal change. These fields should be considered holistically.

Second, this Article contends that the influence of these fields as a force for positive environmental change can and should be made stronger. Consistent with this approach, this Article proposes a normative *environmental priority principle* that should guide Congress, state legislatures, the executive branch, and the courts in adopting, amending, interpreting, and enforcing these nontraditional levers on firms' environmental decisionmaking.²⁷ In other words, this is not a descriptive account of “corporate law *and* the environment” or “antitrust law *and* the environment.”²⁸ Rather than merely stating that the environment is one factor to be balanced with others, the priority principle prioritizes promoting environmental values and goals, acknowledging the maxim of sustainable development that requires providing present and future generations with basic environmental necessities like clean and sufficient water, food, and a habitable planet.²⁹

*147 Third, corporate and business law can collectively fill gaps in addressing problems that traditional environmental law has been ill-equipped to address alone. The most important of these is the issue of cumulative harms like climate change.³⁰ Traditional environmental laws--pollution control statutes like the Clean Air Act,³¹ the Clean Water Act,³² and others--have made significant progress in addressing many environmental concerns, including local air and water quality as well as the cleanup of hazardous waste sites in local communities.³³ Yet enormous challenges remain, including global climate change, deforestation, overfishing, agricultural runoff, and nonpoint source water pollution, to name just a few.³⁴ Many of these massive problems arise from the aggregation of thousands or even millions of small actions.³⁵ But traditional environmental law has had great difficulty addressing cumulative harms.³⁶ Cumulative harms sit uneasily within the traditional paradigm of *148 environmental law, which tends to focus on controlling, reducing, or reporting significant amounts of pollution emitted from pipes and smokestacks, and cannot as easily induce the needed small changes in the behavior of many individuals and firms.

If an effectiveness gap arises as a result of too much focus on smokestacks, thresholds, and the “end-of-the-pipe” problem,³⁷ then looking beyond the pipe may yield new solutions. To address cumulative harms, environmental law should embrace corporate and business law doctrines that can induce incremental changes in firm behavior.³⁸ Different types of firms, whether publicly traded or privately held, are included within this analysis to the extent that they are bound by each category of law.³⁹

***149** If firm managers in ordinary corporations were affirmatively required to consider environmental values and goals alongside profits, corporate law could alter their calculus in deciding whether to reduce their environmental footprints or adopt private environmental governance. Small changes in how federal courts interpret antitrust law, such as acknowledging the environmental benefits of industry cooperation, could remove disincentives for meaningful cooperation aimed at addressing cumulative harms that degrade common pool resources. Stronger mandates in securities regulation to disclose environmental risks, even in the absence of a showing of financial materiality, could shed clearer light on firms' environmental decisionmaking, with the potential to provide incentives for more positive environmental behavior. And changes in bankruptcy law's discharge provisions could remove disincentives for full compliance with public environmental law.

Finally, the need for a more pluralistic understanding of environmental law has become all the more urgent since January 2017. Since that time, the federal government has moved to repeal or delay the implementation of numerous regulations adopted under traditional federal environmental statutes.⁴⁰ The confluence of the rise of private corporate social and environmental action with the emergence of deregulatory pressure on the EPA brings into sharp relief the question whether alternative sources of law can or should promote these environmental values and goals. Heterogeneous institutional actors—including federal agencies other than the EPA, state legislatures, and federal and state courts—enact, enforce, and interpret these corporate and business law rules. As a result, their integration into the environmental law toolkit can offer greater flexibility to address environmental problems than the narrower, more traditional set of tools used by the EPA.⁴¹

To be sure, in this deregulatory moment it is unlikely that all of these institutions will strengthen environmental protection through their enforcement or interpretation of corporate and business law. Thus, aspects of ***150** this approach remain aspirational. The incorporation of an environmental priority principle into these fields may proceed in stages, with actors like courts and state legislatures, which stand outside of the current deregulatory atmosphere, taking a leading role in the first instance.

This Article proceeds as follows. Part I sets the stage by examining how conceptions of environmental law have expanded over time, from a view of the firm as a target of public law regulation to a broader conception of the firm as a participant in environmental governance. It concludes with the observation that even the most nuanced accounts of the expansion of environmental law have stopped short of arguing that positive corporate and business law are themselves environmental law. Part II develops an analytical framework that categorizes the five primary ways in which corporate and business law intersect with firms' environmental decisionmaking: through mandates, incentives, safe harbors, disincentives, and prohibitions. Part III builds out this framework by offering examples of each primary type of interaction from corporate, securities, antitrust, and bankruptcy law. Part IV sets forth and defends a normative environmental priority principle requiring more explicit consideration of environmental values and goals by those institutions that interpret, enforce, and have power to amend the laws governing the corporation. Using the analytical framework developed in Part II, it offers several prescriptive recommendations consistent with this priority principle. This Article concludes by arguing that an expanded environmental toolkit takes on special importance in a deregulatory era.

I. The Generations of Environmental Law

As it has developed over time, environmental law has incorporated different regulatory tools in various combinations, and legal scholarship has recognized these heterogeneous methods of influence. However, the core

narrative of the past and present of environmental law has stopped short of recognizing the important role that the fields of corporate and business law play as nontraditional levers on firms' environmental behavior. It is to this traditional narrative that I now turn.

A. The Traditional Generations

The history of environmental law is a collection of overlapping, related stories. These stories often include a narrative about successive “generations” of efforts to protect the environment.⁴² Scholars disagree about the exact number *151 of generations and what precisely fits into each one,⁴³ but the generational narrative remains powerful. Tellingly, however, this narrative omits corporate and business law.

Scholars generally agree about certain core features of this narrative. First, the locus of environmental decisionmaking shifted from state courts articulating common law principles in nuisance suits at the turn of the twentieth century to federal control by Congress in the 1970s.⁴⁴ Between 1970 and 1990, Congress adopted, and in some cases amended, the core federal environmental statutes, including the Clean Air Act,⁴⁵ the Clean Water Act,⁴⁶ the National Environmental Policy Act (NEPA),⁴⁷ the Endangered Species Act,⁴⁸ the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),⁴⁹ and the Resource Conservation and Recovery Act (RCRA),⁵⁰ that form the heart of environmental law scholarship, education, and practice.⁵¹ In this generation of federal control, regulatory agencies--most notably, the EPA--took a leading role in interpreting and enforcing these new environmental laws in ways that profoundly shaped the administrative state.⁵² *152 After 1990, the story became one of congressional retrenchment; many scholars have pointed out that Congress has neither passed nor amended any major environmental statute since that year.⁵³

Layered on top of this story of the shift from state to federal control is a second narrative about how the tools employed by federal regulators, primarily the EPA, have also shifted over time. These accounts describe a transition away from “command-and-control” regulation, a somewhat pejorative term for prescriptive rules, to market-leveraging approaches that employ price-or quantity-based mechanisms to force polluters to internalize the costs of their environmental externalities and thus reduce pollution more efficiently.⁵⁴ In other words, environmental law in the first generation (with some notable exceptions⁵⁵) directly regulated the effluent or pollution at the end of a pipe or smokestack. The Clean Water Act's prohibition on the “discharge of any pollutant by any person,”⁵⁶ with its limitation that “discharge” includes only effluents “from any point source,”⁵⁷ exemplifies this model. Indeed, many legal scholars have critiqued first-generation environmental law for focusing too heavily on directly regulating pipes and smokestacks.⁵⁸ The second generation represented a shift to environmental law shaping markets by pricing pollution or creating emissions trading *153 schemes. One example of this modal shift is the 1990 adoption of emissions trading in the Clean Air Act Amendments to reduce the chemical precursors to acid rain.⁵⁹

B. Moving Beyond the Traditional Narrative

While these scholarly narratives largely focus on the role of the state in setting and enforcing environmental standards, more recent scholarship has shifted away from an exclusive focus on the environmental law canon and the state as regulator.⁶⁰ This scholarship focuses instead on the role of private action in addressing environmental problems. Drawing on the work of Elinor Ostrom and Robert Ellickson, which analyzes the role of social norms and insider collective action in managing common pool resources,⁶¹ this scholarship has acknowledged that private actors--including firms, industry associations, private standard-setting organizations, and other NGOs--play an increasingly important role alongside public regulators in setting and enforcing environmental standards, either as co-regulators or as sources of environmental governance in their own right. These shared governance

efforts have been described as “new governance,”⁶² “collaborative governance,”⁶³ “responsive regulation,”⁶⁴ and “modular” environmental regulation,⁶⁵ among other monikers. Other scholarship in this vein has sought to move environmental governance inside the firm, focusing on the ways in which the state can encourage private actors, including private firms, to adopt environmental management systems through “reflexive law,”⁶⁶ “management-based regulation,”⁶⁷ or voluntary programs like the EPA's Performance Track.⁶⁸

Still others have moved beyond even the public-private hybrid paradigm to examine the ways in which private actors have adopted private environmental governance.⁶⁹ Scholars have also identified the important phenomenon of environmental “contracts,” which include not only “second-order agreements”—in which private firms allocate responsibility for compliance with public environmental law among themselves “in the shadow” of public regulation—but also supply-chain contract terms requiring environmental performance.⁷⁰ This recent scholarship on private environmental governance, contracting, and second-order agreements elevates the role that private firms can play in environmental governance, not merely as regulatory targets complying with public environmental law, but as active participants in setting and enforcing environmental standards.

Others have sought to expand the paradigm of what constitutes environmental law while retaining a focus on public law rather than private action or social norms. For example, Todd Aagaard has identified how environmental standards have been embedded into federal statutes separate and apart from the canonical environmental statutes and regulations, and how these embedded noncanonical laws are enforced by federal agencies other than the EPA.⁷¹ Richard Lazarus has argued that environmental values have transformed numerous fields of law through a process of assimilation and integration.⁷² These include the law of standing, tort law, property law, administrative law, law governing the sovereignty of the state, and civil rights law.⁷³ In prior scholarship, I have argued that public law environmental regulatory programs can be fragmented beyond the EPA across federal agencies whose core missions do not include environmental protection, as well as across the states and private institutions.⁷⁴ But even these expansive accounts have failed to consider in depth the role of the law of the corporation as a form of environmental law.

C. A Heterogeneous Regulatory Toolkit

Layering the traditional narrative with the contributions of those scholars who have sought to expand beyond it yields the conclusion that environmental law is a heterogeneous field. In an influential article, Larry Lessig identified four different types, or “modalities,” of influence on behavior: law, social norms, markets, and architecture.⁷⁵ Law “directs behavior” under threat of government sanction; social norms constrain behavior through “the enforcement of a community”; markets “regulate through the device of price”; and “architecture” or “features of the world—whether made, or found—restrict and enable in a way that directs or affects behavior.”⁷⁶ The law may constrain behavior directly, such as by prohibiting a bad act. But the law can also regulate behavior indirectly by shaping or regulating one of the other modalities (social norms, markets, or architecture), which then constrains behavior through its own means of influence.⁷⁷ Environmental law employs each of these means of influence both alone and in combination.

Regulators have a diverse set of tools at their disposal to promote environmental values and goals like conservation of common pool resources and the reduction or prevention of pollution.⁷⁸ They can use prescriptive rules like technology requirements, or performance standards that require firms to meet certain environmental goals. They can create property rights over common pool resources, impose market-leveraging approaches like taxes and subsidies, or adopt tradable permits for emissions. Regulators can employ informational regulation, requiring the disclosure of environmental information to the public with an eye toward providing incentives for better environmental performance. They can impose environmental standards through procurement rules or supply-chain management, or can mandate or encourage the purchase of insurance for environmentally risky activities.

To take one example, there are many ways to increase recycling and limit the use of virgin materials,⁷⁹ a concern that implicates the problem of cumulative harms. A regulator could simply legally mandate the recycling of certain products, or it could ban the use of virgin materials in production. The law could require that products procured for government use contain a minimum percentage of recycled materials in order to encourage the growth of *157 a market for recycled goods.⁸⁰ The law could encourage recycling behavior by creating exceptions to onerous reporting and handling requirements for solid, hazardous waste if the product is recycled in a closed-loop process.⁸¹ The law could operate through price mechanisms, either by taxing the use of virgin materials or subsidizing the use of recycled ones. Deposit refund schemes can provide incentives for consumers to return objects like plastic or glass bottles to stores for recycling.⁸² The law could establish a tradable permit scheme, requiring an allowance to use a certain amount of virgin materials, but permitting firms to trade these allowances. The law could influence the physical convenience or architecture of recycling. Local governments could set schedules for curbside recycling that are more frequent than trash pickups.⁸³

As alternatives to public law rules, social norms could develop (or be consciously shaped) within a community to identify recycling as “patriotic,” or to shame those who discard, rather than recycle, valuable virgin materials.⁸⁴ Or a private environmental governance solution could arise in which firms, NGOs, or industry associations employ parallel versions of these public law tools or innovate with new solutions.⁸⁵ For example, private firms or NGOs could develop take-back programs that encourage consumers to return old products when they purchase new ones, or firms could impose limits on their suppliers' use of virgin materials.⁸⁶

***158 D. What Is Missing**

Despite the widespread understanding that environmental law is a heterogeneous field, still missing, even from these discussions that look beyond traditional federal environmental statutes, is an in-depth, holistic account of the impact of corporate, securities, antitrust, and bankruptcy law on firms' environmental decisionmaking. As noted above, to the extent that environmental law scholars have examined these fields of corporate and business law, their approach has tended to focus on a single field, a single doctrine, or a single case.⁸⁷

Environmental law casebooks used in law school, which arguably represent what is considered central to the field, likewise do not generally offer any in-depth discussion of whether firm managers have a fiduciary duty only to maximize profit for the benefit of shareholders, or whether they have broader discretion to take into account the long-term interests of a wider class of stakeholders, including customers, employees, the local community, and possibly the environment itself.⁸⁸ Nor do they include any discussion of the business judgment rule--a principle of state corporate law that affords firm managers the discretion to act in the best interests of the firm, even taking into account environmental values, without second-guessing by the courts.⁸⁹ In discussions of the management of common pool resources, even those casebooks that discuss Ostrom's insider solutions concept do not mention the potentially limiting implications of antitrust law for private industry cooperation.⁹⁰ Nor do they discuss the implications of the Bankruptcy Code for a firm that files for bankruptcy and seeks to discharge its environmental liabilities.⁹¹ Perhaps because securities regulations now impose affirmative obligations on publicly traded firms to disclose certain environmental risks, several casebooks do mention these obligations.⁹²

*159 One could argue that it is unfair to criticize environmental law casebooks for failing to discuss multiple fields of law; casebooks are intentionally focused pedagogically on teaching the core of a field in depth. The alternative, one might say, would lead to a kind of hodgepodge approach of combining materials from different fields that existed before environmental law coalesced into a single field.⁹³ If, however, one takes seriously the arguments that environmental law is a heterogeneous field with numerous tools at its disposal to promote environmental values and goals, and that business firms play a significant role in promoting or hindering progress

toward environmental goals, then environmental law casebooks should at least acknowledge the significance of corporate law, securities regulation, antitrust law, and bankruptcy law to the core of environmental law's enterprise.

This Article's analysis thus builds upon the work of those who have raised the profile of the business firm in environmental law, and of those who seek to expand our understanding of environmental law, by offering what is missing in prior environmental law scholarship--a holistic analysis of the role that positive corporate law, securities regulation, antitrust law, and bankruptcy law can and should play in shaping firms' environmental behavior. Each of these fields interacts with environmental decisionmaking--meaning the decisions that firm managers make to comply with public environmental law, or to go beyond compliance by adopting private environmental governance--in different, but sometimes overlapping, ways. They either increase or decrease the likelihood that firm managers will take environmental goals into account. In other words, unlike private environmental governance, these fields themselves constitute positive law. But in their "law"-ness, they operate more indirectly than canonical environmental statutes like the Clean Water Act, which directly prohibit or regulate what can come out of a pipe. These fields of corporate and business law shape norms, markets, and architecture in ways that profoundly affect firms' environmental decisionmaking.

*160 II. The Forms of Interaction

This Part offers the Article's main analytical contribution--a taxonomy of five primary ways in which the fields of law governing the corporation and markets interact with firms' environmental decisionmaking. This analysis demonstrates that viewing each field separately may miss the bigger-picture story about how these fields operate in harmony or conflict not only with traditional environmental law and values, but also with one another. In other words, changing one doctrine may be necessary but not sufficient to change firm behavior with respect to the environment. A unified approach is required.

To build on the example of recycling presented above,⁹⁴ if securities regulations mandated disclosure of information on firms' recycling practices, that disclosure mandate would likely provide secondary incentives for improved recycling behavior.⁹⁵ Corporate law's business judgment rule would be neutral toward this change: While the rule alone would do nothing to encourage recycling behavior, it would provide a safe harbor for managers to increase such behavior, even if doing so carried short-term costs, against claims by shareholders that the managers' decisions are not in the best interests of the firm.⁹⁶ However, if private firms in an industry wanted to collaborate to set industry-wide standards or mandates for recycling, in which firms that did not meet the standard were penalized with a boycott or refusals to deal, this could raise problems under antitrust law, which might either prohibit--or at the very least, discourage--such collaboration.⁹⁷ And if bankruptcy law allowed a firm facing financial trouble to discharge its pre-petition liability for failure to comply with legal recycling mandates, this would create disincentives for *161 environmental performance by firms anticipating a bankruptcy filing.⁹⁸ It is essential to view these fields of law in a larger context.

There are five primary forms of interaction between these fields and firm managers' decisions to promote environmental values and goals: mandates, incentives, safe harbors, disincentives, and prohibitions.⁹⁹

Mandates: Corporate and business law can impose mandatory environmental obligations on firms, with the effect that firm managers must take environmental considerations into account in some fashion. Examples in this category include securities regulations that require publicly traded firms to disclose financially material environmental and climate risks to investors. A second example lies in the Department of Justice's use of antitrust law to break up collusion by the major automakers and their industry association which prevented pollution control technology from reaching the market in the 1960s.¹⁰⁰

Prohibitions: On the flip side, corporate and business law can also prohibit firm managers from taking environmental values into account--at least under some circumstances. One example of such a prohibition can be

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

found in the way that antitrust law generally precludes firms from entering into agreements with their competitors to conserve environmental resources *162 through industry standards that incorporate price fixing or sanctions on noncomplying firms.¹⁰¹ And while courts generally do not intrude on firm managers' discretion to take values other than the maximization of short-term shareholder value into account in the day-to-day operations of the firm,¹⁰² in the limited context of firm takeovers, courts have interpreted Delaware corporate law more narrowly to require a connection between managers' decisions and increased short-term shareholder value.¹⁰³

Safe harbors: Safe harbors create protected spheres for firm managers, who, in their discretion, wish to take environmental values into account in their decisionmaking. For example, in the ordinary course of business, firm managers may take the interests of multiple stakeholders into account and, under the business judgment rule, courts will not second-guess management decisions even if they fail to maximize short-term shareholder value.¹⁰⁴ Safe harbors do not prohibit such actions. Nor, however, do they mandate or provide incentives for such actions.¹⁰⁵ The mere fact that a manager can exercise her discretion without fear of liability is distinct from an incentive, because nothing in the safe harbor provides a benefit to a firm manager who chooses to take environmental values into account in her decisions. Arguably, the choice is based on the manager's preexisting preferences, and managers may just as easily decline to use the safe harbor.

Incentives and disincentives: The final two categories of interaction occur when a corporate or business law field creates either incentives or disincentives for firm managers to undertake environmentally protective action. Markets affect behavior by making it more or less costly as a function of price, while norms affect behavior by making it more or less costly as a result of social sanction or approbation. When corporate and business law fields operate indirectly in this way, they create either costs or subsidies for firm managers to take the environment into account in their decisions. As an example, the fact that some pre-petition environmental obligations can be discharged in bankruptcy creates disincentives for firms to meet those obligations fully.¹⁰⁶ Similarly, antitrust law does not categorically prohibit under a per se rule all kinds of industry standard setting aimed at promoting the conservation of environmental resources; some are evaluated under the more fact-intensive rule of reason inquiry. To the extent there is uncertainty *163 about whether antitrust law prohibits such collective action, this uncertainty may create disincentives for certain forms of private environmental governance.¹⁰⁷

On the flip side, corporate and business law can create incentives for positive behavior with respect to the environment. For example, more than thirty states have created the "benefit corporation" as a new corporate form. While a firm must opt into this form of incorporation, once the firm has selected the benefit corporation form, its directors and officers are obligated to take environmental (or social) values into account alongside corporate profit for shareholders, and must publish reports that evidence their progress toward these commitments.¹⁰⁸ The benefit corporation goes beyond the safe harbor provided by the ordinary business judgment rule: It provides incentives for firm managers to take environmental values into account in their decisionmaking. They gain the reputational benefit of presenting themselves to the public as benefit corporations, and are protected by a bright-line bar to certain shareholder lawsuits. There is, however, some question as to how enforceable such commitments are, leaving them in the category of incentives, rather than mandates.¹⁰⁹ Finally, while Securities and Exchange Commission (SEC) environmental disclosure rules are primarily mandates because they require the disclosure of certain information, they have secondary effects that operate as incentives for better environmental behavior.¹¹⁰

Laying out these categories according to whether they operate in confluence or conflict with environmental values, combined with the degree of influence they exert, yields the following taxonomy.

***164 Table 1**

Five Primary Forms of Interaction

DEGREE OF INFLUENCE	CONFLUENCE WITH ENVIRONMENTAL VALUES	CONFLICT WITH ENVIRONMENTAL VALUES
Obligations (Must or Must Not)	<i>Mandates</i> SEC environmental disclosures (primary effect); antitrust prevention of anti-environmental collusion	<i>Prohibitions</i> Antitrust per se rule; Delaware corporate law director obligations in takeover context
Enabling Provisions (May)	<i>Safe harbors</i> Ordinary business judgment rule	
Market- or Norm-Leveraging (Should or Should Not)	<i>Incentives</i> Benefit corporation; SEC environmental disclosures (secondary effect)	<i>Disincentives</i> Bankruptcy discharge of environmental liability; antitrust rule of reason

To be sure, any taxonomy of this sort necessarily involves some oversimplification. But these categories are analytically useful nonetheless. The taxonomy supports this Article's holistic account by demonstrating commonalities across fields of law. It also exposes a more nuanced set of influences than mere conflict-versus-confluence or mandates-versus-incentives. Part III will give more content to the categories by highlighting examples of each primary form of interaction. Part IV will then demonstrate that this account of the forms of interaction reveals a more complete set of options available for integrating environmental values into these areas of corporate and business law. These doctrines can evolve not only from conflict to confluence, but also from prohibition or disincentive to safe harbor, from safe harbor to incentive, and from incentive to mandate.

Corporate law, securities law, antitrust law, and bankruptcy law are not just a fourth generation of environmental law.¹¹¹ Rather, they have their own environmental narratives to tell. Instead of telling them as discrete stories, the next Part highlights common themes across these fields.

***165 III. Corporate and Business Law as Environmental Law**

Having developed the taxonomy, this Part offers detailed examples of each type of interaction. Given the vast nature of each field and the scholarship within it, this Part does not purport to offer a complete account of every such interaction, but rather aims to highlight examples within each category to draw common lessons.

A. Mandates

1. Securities disclosures

Securities regulation offers one of the strongest examples of how business law can affect the environmental decisions of publicly traded firms.¹¹² After briefly summarizing firms' current disclosure obligations, this Subpart situates securities disclosure requirements in the context of environmental informational regulation more broadly, in order to highlight their primary nature as a mandate while recognizing their secondary nature as an incentive. This Subpart then examines the debate over how broadly to interpret the concept of materiality, which will have significant consequences for the impact of such disclosure requirements on firms' environmental performance going forward.¹¹³

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

A major purpose of the securities laws in the United States is to provide information to investors concerning securities offered for sale to the public, in order to “protect investors against manipulation of stock prices.”¹¹⁴ Securities law achieves this goal of market integrity largely through informational regulation. Under the Securities Act of 1933¹¹⁵ and the Securities Exchange Act of 1934,¹¹⁶ the SEC adopted Regulation S-K to harmonize corporate disclosures of material information to investors when securities are initially offered to the *166 public; in connection with the annual shareholders' meeting; in both annual and quarterly reports; and when certain specified events occur, such as a merger or acquisition.¹¹⁷

Regulation S-K specifies how its general provisions apply to environmental issues and risks. It requires publicly traded firms to disclose the costs of complying with environmental laws, including material capital expenditures; material pending legal proceedings, including environmental legal proceedings; material impacts of risk events, including material “risk factors”; and a general management discussion and analysis of financial condition, including known future trends as well as “uncertainties that are reasonably likely to have a material effect on financial condition or operating performance.”¹¹⁸ In 2010, in response to several investor petitions, the SEC issued an interpretive release to clarify that these existing disclosure requirements apply to climate change, and to provide guidance to public companies on such disclosures.¹¹⁹ The SEC's release explained that firms must disclose the impact of actual or potential legislation and regulations regarding climate change, including international accords; indirect consequences of regulations or business trends, such as changes in demand for goods or services resulting from climate change; and the physical impacts of climate change, including risks to performance and operations as a result of extreme weather events.¹²⁰

Mandatory information disclosure is an important tool of environmental governance.¹²¹ Indeed, NEPA--the first major environmental statute adopted by Congress--contains no substantive performance standards; it requires only the assessment and public disclosure of information about potentially significant environmental impacts of major federal actions.¹²² While informational regulation *mandates* the disclosure of information, it has the secondary benefit of providing *incentives* to those disclosing that information to *167 change their behavior.¹²³ For example, the EPA's Toxics Release Inventory (TRI) program, which requires certain firms to file public annual reports regarding their use and release of listed toxic chemicals, has coincided with a dramatic reduction in the use of those chemicals and their release into the environment.¹²⁴ These reductions have occurred through a combination of self-monitoring by firms and external monitoring of firm actions by the public, regulators, investors, and peers.¹²⁵ Publicly traded firms have faced secondary implications of TRI reporting, including drops in stock prices and increases in borrowing and insurance costs.¹²⁶

A similar dynamic is at work in the securities regulation context. In some circumstances, environmental and climate-related risks can have a legally material impact on a firm's financial position.¹²⁷ A recent high-profile example involved ExxonMobil's failure to disclose environmental and climate-related risks. In 2016, the SEC initiated an investigation into whether the firm's securities disclosures adequately addressed the material risks of climate change to its business, in particular with respect to how the firm valued its oil reserve assets.¹²⁸ The SEC's investigation mirrored an earlier, separate inquiry by the *168 New York Attorney General into whether ExxonMobil misled its investors about the possibility that its assets--oil resources that remained in the ground to be extracted at some point in the future--could become “stranded” if future environmental regulations precluded the firm from extracting them, or if regulations made extraction unprofitably expensive.¹²⁹ ExxonMobil ultimately chose to reduce its estimate of recoverable reserves in a subsequent 10-K filing by more than three billion barrels of oil equivalent, including “de-booking” all the reserves it held in a Canadian oil sands project.¹³⁰ Separately, in response to a shareholder proposal requesting a public report regarding the impact of climate change on the firm, ExxonMobil indicated in December 2017 that it would discuss “energy demand sensitivities, implications of two degree Celsius scenarios, and positioning for a lower-carbon future” in subsequent disclosures.¹³¹ In addition to refocusing management attention, mandated securities disclosures can spur more effective public monitoring of

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

firms' environmental behavior when such disclosures are compared to the firms' statements to other stakeholder groups, including regulators, the public, and customers.¹³²

The key doctrinal debate is how the concept of materiality, the touchstone of what firms must disclose, interacts with both environmental risks *to* the firm (such as the physical effects of climate change) and environmental externalities *caused by* the firm, which might be the subjects of regulation or litigation. The U.S. Supreme Court has held that a fact is material to investors if there is “a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.”¹³³ Silence on a matter is not ***169** actionable unless there is a specific duty to disclose information, or if the failure to disclose creates a misleading impression.¹³⁴ Thus, what the “reasonable investor” cares about is paramount.

The relevant question here is whether materiality encompasses environmental disclosure only when environmental issues are connected to a firm's financial performance, or if it applies more broadly, covering environmental issues for their own sake, even if unrelated to financial performance.¹³⁵ While SEC regulations repeat the Supreme Court's broad language defining materiality,¹³⁶ the agency has generally interpreted this language to encompass those environmental disclosures that are material to a firm's financial performance.¹³⁷ For example, in its 2010 interpretive release providing guidance on climate disclosures, the SEC explained why regulatory and ecological developments in the climate arena are worthy of disclosure, noting that such developments “could have a significant effect on operating and financial decisions,” such as by “changing prices for goods or services” and creating “new opportunities for investment.”¹³⁸ Empirical data bear out a positive relationship between financial and environmental performance. A 2015 meta-analysis of more than 2,000 empirical studies exploring the relationship between environmental, social, and governance (ESG) performance and corporate financial performance concluded that the two are “positively correlated.”¹³⁹

Several legal scholars have argued that materiality should be understood more broadly to require disclosures about environmental and social risks even if they do not rise to the level of financial materiality, because these risks, too, are of legal significance to investors.¹⁴⁰ Empirical studies have demonstrated that private investor interest in firms' social and environmental risks and their ***170** environmental decisionmaking has increased in recent years.¹⁴¹ In 2016, the SEC issued a concept release “to seek public comment on modernizing certain business and financial disclosure requirements in Regulation S-K,” including social and environmental disclosures.¹⁴² More than 80% of the non-form comments received by the SEC relating to sustainability called for improved disclosure and standardization of such disclosure.¹⁴³ One recent high-profile example demonstrates investor concern for social and environmental governance. In January 2018, Laurence Fink, CEO of the investment firm BlackRock--the largest institutional investor in the world--wrote a letter to the CEOs of publicly traded companies in which the firm invests, admonishing that “[t]o prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society.”¹⁴⁴

There is a statutory basis for a broader understanding of materiality as encompassing nonfinancial environmental and social risks. Beyond information explicitly required to be disclosed, the SEC has broad authority to require disclosure of “such other information ... as the Commission may by rules or regulations require as being necessary or appropriate in the public interest or for the protection of investors,” regardless of whether such information is financially material.¹⁴⁵ Indeed, the SEC has made certain disclosures mandatory, such as those relating to board members' attendance at meetings; board committee structure; executive compensation; and, since Watergate, illegal actions by management, even in the absence of any link to financial materiality.¹⁴⁶

***171** Although at present it appears unlikely that the SEC will take further action to require social and environmental reporting in response to its 2016 concept release,¹⁴⁷ the possibility remains for another

administration to take such action in the future. The broader interpretation of materiality would be consistent with the environmental priority principle put forth below, arguably offering stronger incentives for firm managers to take environmental values into account in their decisionmaking.¹⁴⁸

2. Antitrust law

Antitrust law offers a second example of how business law can mandate or prohibit environmentally positive behavior by firms. While several scholars have identified a conflict between antitrust law's goal of promoting competition and the environmental norms of promoting conservation,¹⁴⁹ the relationship between the two is more complex. Before this Article turns to how antitrust law prohibits and creates disincentives for certain forms of industry environmental cooperation,¹⁵⁰ this Subpart first offers a narrative of confluence, describing how antitrust law can advance the goals of environmental protection by prohibiting anti-environmental collusion.

Antitrust law has long been said to serve many purposes, including promotion of “efficiency” in markets;¹⁵¹ promotion of justice;¹⁵² protection of consumers from monopoly firms' ability to increase prices;¹⁵³ and protection *172 of competitors, especially small businesses, from “larger, more efficient firms.”¹⁵⁴ But antitrust statutes adopted after the Sherman Act,¹⁵⁵ including the Clayton Act¹⁵⁶ and the Federal Trade Commission Act,¹⁵⁷ focused more squarely on the notion of promoting market competition and targeting anticompetitive behavior.¹⁵⁸

Section 1 of the Sherman Act prohibits “[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce.”¹⁵⁹ There are certain kinds of actions that are per se illegal under the antitrust laws, rendering antitrust law an absolute bar.¹⁶⁰ Such actions include price fixing, horizontal boycotts, and output limitations.¹⁶¹ Courts apply the per se rule when firms aim to “disadvantage competitors by ‘either directly denying or persuading or coercing suppliers or customers to deny relationships the competitors need in the competitive struggle.’”¹⁶² In the per se unreasonableness context, the plaintiff need not show anticompetitive effect, as harm to competition is presumed.¹⁶³

Before the enactment of the Clean Air Act, the federal government invoked antitrust law to end a collusive agreement among major automakers and their industry association to keep pollution control technology from reaching the California market. By 1952, authorities addressing air pollution in Los Angeles County had accepted scientific findings that motor vehicle emissions were the major source of the smog that blanketed the Los Angeles basin.¹⁶⁴ Local officials began to reach out to the major automobile *173 manufacturers about research on emissions-control technology.¹⁶⁵ In 1953, the Automobile Manufacturers' Association (AMA), an industry trade group, began a campaign to study the issue and committed to funding research.¹⁶⁶ In 1955, several automobile manufacturers, including the four major manufacturers--General Motors, Ford, Chrysler, and American Motors--entered into a formal cross-licensing agreement to share technological information and data on the development of emission-control technology,¹⁶⁷ an action that later became the subject of antitrust litigation.¹⁶⁸ They announced their decision publicly, garnering some praise for addressing the smog problem.¹⁶⁹

In 1960, California passed the California Motor Vehicle Pollution Control Act.¹⁷⁰ The Act mandated that manufacturers of new cars install emissions-control devices; however, the mandate was only triggered once such devices had been certified by the newly created Motor Vehicle Pollution Control Board.¹⁷¹ By 1964, the Board had certified four emissions-control devices as meeting the state's standards, triggering the mandate under the Act.¹⁷² Independent firms, rather than the major automakers, had developed these devices.¹⁷³ Shortly after the state certified these devices, the major automakers announced that they, too, had developed their own emissions-

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

control technology,¹⁷⁴ arguably so that they would not be required to license technology from other firms. This sequence of events led some officials in California to conclude that the major automakers had conspired to delay making their own technologies publicly available.¹⁷⁵ After Los Angeles County officials asked the U.S. Attorney General to investigate possible collusion, a grand jury was convened.¹⁷⁶

Although the Department of Justice did not file criminal charges, in January 1969 it filed a civil antitrust suit against the AMA and the four major *174 automakers, alleging that the defendants had conspired among themselves and with smaller motor vehicle manufacturers “to eliminate competition in the research, development, manufacture and installation of motor vehicle air pollution control equipment, and in the purchase from others of patents and patent rights, covering such equipment,” in violation of section 1 of the Sherman Act.¹⁷⁷ In response to the complaint, the defendants argued that their cooperation had actually accelerated the development of emissions-control devices and noted that collaboration was required to ensure that all manufacturers would be able to comply with the increasingly stringent standards.¹⁷⁸ After the lawsuit was filed, a partner in the law firm representing the AMA penned an article¹⁷⁹ explaining that individual consumers had been “unwilling to spend the additional small amount” necessary to purchase vehicles equipped with emissions-reducing devices.¹⁸⁰ Thus:

So far as the installation of devices was concerned, therefore, the manufacturers had a substantial and legitimate interest in cooperating. No company wanted to incur a cost disadvantage, either in terms of an increase in sales price or an adverse effect on vehicle driveability, without some assurance that all manufacturers were incurring similar disadvantages in the marketplace.¹⁸¹

Arguably, this was as much a problem of the interaction between corporate law and antitrust law in competitive markets as it was one of antitrust law alone. If firms had a broader mandate beyond profit maximization, including to contribute to the public interest, perhaps they would have been more willing to incur a short-term cost disadvantage, even in a competitive market, rather than enter into an agreement to limit competition.

The parties resolved the suit by entering into a consent decree, which required the defendants not to conspire to delay the development of emissions-control devices and to make available without royalties both patent licenses and data on the emissions-control devices they had developed.¹⁸² However, the decree did not require the defendants to admit liability or pay monetary penalties or damages for environmental harm; nor did it require the *175 retrofitting of vehicles.¹⁸³ Despite the lack of damages or penalties, in this case antitrust law served as a mandate to promote environmental goals, preventing collusion in the market when firms feared that developing an environmental product would put them at a competitive disadvantage.

A second, more recent example of antitrust law serving as an environmental mandate comes from the European Union, not the United States, but the example offers a similar lesson about the potential confluence, rather than conflict, between antitrust principles and environmental goals. In 2011, the European Commission fined two consumer products firms, Unilever and Procter & Gamble, more than 300 million euros combined for entering into an agreement to maintain prices for laundry detergent while the firms switched to selling a more concentrated, environmentally preferable formulation.¹⁸⁴ The firms switched to the more environmentally friendly formulation as a result of their participation in a voluntary industry initiative called the “Code of Good Environmental Practice for Household Laundry Detergents,”¹⁸⁵ a classic example of private environmental governance. The voluntary initiative included reducing the amount of detergent needed for each load of laundry, as well as overall product weight and packaging.¹⁸⁶ The industry initiative appropriately did not include any commitments regarding price fixing.¹⁸⁷

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

However, the firms privately “agreed to keep the price unchanged” when the “products were ‘compacted’” in a way that might appear to a consumer that he would be able to wash fewer loads of laundry than the compacted product was capable of cleaning.¹⁸⁸ In addition, they engaged in other forms of price collusion, including “restrict[ing] their promotional activity” and “decid[ing] not to pass the benefit of cost savings (reduced raw materials, packaging and transport costs) on to consumers.”¹⁸⁹ The firms further agreed on direct price *176 increases and “exchanged sensitive information on prices and trading conditions, thereby facilitating the various forms of price collusion.”¹⁹⁰

In this case, just as in the case of the automakers, antitrust law enforcement served as an environmentally positive mandate. Relying on antitrust law, the European Commission fined these firms for seeking to avoid passing cost savings from an environmentally beneficial product onto consumers. The motivations of the consumer products firms mirrored those of the automakers: In both cases, the firms feared that being the first to market an environmentally preferable product would reduce profits or create a competitive disadvantage vis-à-vis other firms in the marketplace. This example likewise suggests the importance of viewing antitrust law in connection with other fields, such as corporate law. Firms driven by a profit motive experience that motive in the context of a competitive environment.¹⁹¹

B. Prohibitions and Disincentives: The Antitrust Per Se Rule and the Rule of Reason

While antitrust law can serve as an environmental mandate by prohibiting collusive behavior that keeps environmentally preferable goods from the market, there is also conflict between antitrust law's goals of promoting competition and environmental law's goals of promoting *177 conservation.¹⁹² Because antitrust law's per se rule and rule of reason operate on a somewhat fluid continuum,¹⁹³ this Subpart discusses the two doctrines together. The per se rule operates as a prohibition, whereas the rule of reason operates as both a prohibition and a disincentive.

As noted above, antitrust law generally prohibits certain types of market activity--price fixing, horizontal boycotts, and output limitations--as illegal per se, and harm to competition is presumed.¹⁹⁴ For example, if an industry association declines to award a seal of approval necessary for a product's sale without any good faith attempt to test the product's performance, but rather simply because that product is manufactured by a competitor, such an action would be illegal per se.¹⁹⁵ Under this Article's framework, a per se violation is thus a prohibition.

The more fact-intensive inquiry under the rule of reason tests “whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition.”¹⁹⁶ While this extremely broad statement might suggest that any fact is relevant to the inquiry, the salient facts under the rule of reason are “those that tend to establish whether a restraint increases or decreases output, or decreases or increases prices.”¹⁹⁷ If an anticompetitive effect is found, then the action is illegal and the rule of reason operates, like the per se rule, as a prohibition.¹⁹⁸ The rule of reason can also operate as a disincentive, even if no *178 court finds an anticompetitive effect, as uncertainty and litigation risk may discourage firms from undertaking legally permissible, environmentally positive industry collaborations.¹⁹⁹

Associations of firms have adopted numerous mechanisms of private environmental governance to address the management of common pool resources like fisheries, forests, and the global climate.²⁰⁰ Examples include the Sustainable Apparel Coalition's Higg Index²⁰¹ and the American Chemistry Council's Responsible Care program.²⁰² But private industry standards raise special antitrust concerns. An agreement among competitors with respect to product or process specifications may exclude competitors who fail to meet such standards, raising the specter that such industry collaborations really constitute output limitations or efforts to limit competition.²⁰³

While the U.S. Supreme Court has scrutinized private standard-setting associations carefully,²⁰⁴ it has noted that if associations “promulgate ... standards based on the merits of objective expert judgments and through procedures that prevent the standard-setting process from being biased by members with economic interests in stifling product competition ..., those private standards can have significant procompetitive advantages.”²⁰⁵ In the absence of price fixing or a boycott, a rule of reason analysis generally applies to product standard setting by private associations.²⁰⁶ The uncertain outcome *179 inherent in the application of antitrust law in this context could therefore serve as a potential disincentive to the adoption of private industry standards.²⁰⁷

The challenge of course is that some form of explicit sanctions on noncompliant industry members may be necessary for private industry standards to be effective. In the context of private reputational mechanisms like the New York Diamond Dealers Club,²⁰⁸ Barak Richman has pointed out that the Club's use of reputational sanctions and voluntary refusals to deal with actors who flout industry norms, while welfare enhancing, could nonetheless amount to violations of antitrust law.²⁰⁹ This echoes the concern raised by Andrew King and Michael Lenox in their extensive empirical analysis of the Responsible Care program created by the Chemical Manufacturers Association (now the American Chemistry Council).²¹⁰ King and Lenox concluded that the absence of explicit sanctions on members who failed to meet the standards set by the program left the program vulnerable to “opportunism.”²¹¹ While they suggested that industry associations could look to third parties to enforce the rules,²¹² an alternative way to facilitate the long-term environmental benefits of stronger sanctions would be to interpret antitrust law in conformity with the environmental priority principle presented below.²¹³

*180 In some instances, the conflict between the values of promoting competition and conserving environmental resources can be stark.²¹⁴ Jonathan Adler, for example, has identified this conflict in the context of fisheries—a tragedy of the commons situation in which some form of collective action is required to avoid overfishing.²¹⁵ He cites as an example *Manaka v. Monterey Sardine Industries, Inc.*, in which a fisherman was excluded from a local fishing cooperative.²¹⁶ The fisherman sued the cooperative under the Sherman Act, and the court found an antitrust violation in his exclusion.²¹⁷ While the fishing cooperative's policies were no doubt exclusionary, Adler contends that they also promoted conservation by restricting catch.²¹⁸ The fishery collapsed by the 1950s, a collapse Adler hypothesizes might have been “inevitable” but that perhaps might not have occurred in the absence of the antitrust suit.²¹⁹

While a court performing a rule of reason analysis must consider whether a restraint on trade suppresses or destroys competition, Adler points out that courts may also “consider offsetting efficiencies from otherwise anticompetitive arrangements.”²²⁰ It is not clear, however, that the courts have consistently taken these factors into account.²²¹ Among other potential remedies, Adler argues that to resolve this tension between antitrust law, on the one hand, and private collective action to conserve environmental resources, on the other, courts should more actively consider the “ancillary conservation benefits of otherwise anticompetitive conduct.”²²² Recognizing the long-term health of a fishery would be consistent with antitrust law's purpose of ensuring viable markets exist in the future, and consistent with the environmental priority principle introduced below.²²³

*181 C. Safe Harbors: The Business Judgment Rule

Corporate law is the positive law that directly governs the relationship between firm managers, shareholders, and other stakeholders of the firm.²²⁴ Yet it serves a more indirect architectural function with respect to managers' environmental decisionmaking. Firms' architecture is a function of their design and of the “code” defining how they are constituted.²²⁵ If firm managers are obligated to maximize profits for shareholders in the short term and prohibited from taking other values into account, they may behave negatively with respect to environmental or

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

other social goals.²²⁶ If firm managers have discretion to take environmental values and goals into account, then they may behave in a more environmentally positive way-- especially given the fact that environmental interests are often long-term in nature.²²⁷ This Subpart highlights the role of the business judgment rule as a safe harbor that creates a protected sphere of discretion.

One view of the duties of firm managers, embodied in the work of Milton Friedman, sees inexorable conflict between protection of the natural environment, or other social missions, and private firms' obligation to seek profits.²²⁸ Under Friedman's view, if business managers undertake socially responsible actions that do not increase profits, they are imposing an unrepresentative "tax" on their shareholders and inappropriately engaging in ***182** public policymaking.²²⁹ But other corporate law scholars-- including Margaret Blair, Einer Elhauge, and Lynn Stout--have argued that firm managers have a protected realm of discretion in which to exercise their "business judgment," one in which they have license to take values beyond the maximization of shareholder wealth into account.²³⁰ Ultimately, which of these perspectives prevails is a question of corporate law as drafted by state legislatures and interpreted by state courts.

State corporate law governs firm incorporation, including both mandatory firm obligations and the default rules around which firms can contract.²³¹ Because more than one million firms, and more than two-thirds of the Fortune 500, are incorporated in Delaware,²³² the Delaware General Corporation Law and the Delaware Court of Chancery's interpretations of that law have played a significant role in the development of corporate legal rules and doctrines. Under black-letter corporate law, firm directors owe fiduciary duties to the corporation and its shareholders.²³³ However, courts apply the ***183** deferential business judgment rule to ordinary decisions by managers and directors:

When director decisions are reviewed under the business judgment rule, this Court will not question rational judgments about how promoting non-stockholder interests--be it through making a charitable contribution, paying employees higher salaries and benefits, or more general norms like promoting a particular corporate culture--ultimately promote stockholder value. ... [H]owever, the directors must act within the range of reasonableness.²³⁴

In other words, when a shareholder challenges a decision by the firm's directors, a court "presum[es] that in making a business decision the directors of a corporation acted on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the company."²³⁵ This deferential standard of review does not permit the court to "substitute its judgment for that of the board if the [board's] decision can be 'attributed to any rational business purpose.'" ²³⁶ The business judgment rule "protects against the risk that a court might 'impos[e] itself unreasonably on the business and affairs of a corporation.'" ²³⁷

The business judgment rule thus acts as a safe harbor, insulating from liability those firm directors who choose to eschew short-term profit for shareholders in the name of promoting other, longer-term values.²³⁸ In ***184** *Shlensky v. Wrigley*, such values included the culture of baseball as a daytime sport and the long-term impact on property values in the surrounding community.²³⁹ A minority shareholder of the corporation that owned the Chicago Cubs and operated Wrigley Field sued the directors of the firm, as well as its president and majority shareholder, Philip K. Wrigley.²⁴⁰ The plaintiff alleged that every major league baseball team other than the Cubs had scheduled games at night "for the specific purpose of maximizing attendance and thereby maximizing revenue and income."²⁴¹ The plaintiff further alleged that the Cubs' recent operating losses were caused by declining attendance at home games, a direct result of the defendants' refusal to install lights at Wrigley Field and to schedule games at night.²⁴² The plaintiff alleged that Wrigley's failure to install lights was "not because of

interest in the welfare of the corporation but because of his personal opinions ‘that baseball is a “daytime sport” and that the installation of lights and night baseball games will have a deteriorating effect upon the surrounding neighborhood.’”²⁴³ The court reaffirmed the longstanding history of the business judgment rule, noting that it would not substitute its judgment for that of the directors unless the action was tainted by fraud or self-dealing.²⁴⁴ The court reasoned that in the absence *185 of a showing of any such misconduct, the corporation's directors could reasonably take into account “the long run interest of the corporation in its property value at Wrigley Field.”²⁴⁵

Under this Article's taxonomy, the business judgment rule thus serves as a safe harbor, on the theory that firm managers, rather than courts, are best equipped to determine whether environmentally positive behavior lies in the corporation's best interests.²⁴⁶ As currently construed, the business judgment rule is consistent with the environmental priority principle presented below,²⁴⁷ but does not tip the scales either in favor of or against environmental values and goals; rather, the directors' exogenous preferences govern.

D. Incentives: The Benefit Corporation

Rather than relying on the discretion afforded to managers under the business judgment rule on an issue-by-issue basis, some firms have affirmatively chosen to incorporate (or reincorporate) as “benefit corporations” under state law with a dual mission to promote both shareholder profit and a social or environmental purpose.²⁴⁸ These hybrid forms of social enterprise *186 explicitly allow firm managers to take environmental interests into account in their decisions without fear of litigation by unhappy shareholders.²⁴⁹

The ability to incorporate as a benefit corporation is best characterized as an incentive. In comparison to the ordinary corporate form, which provides only the safe harbor of the business judgment rule, the benefit corporation more strongly promotes environmental values and goals. It confers a reputational benefit on those firms that present themselves to the public as environmentally or socially beneficial firms. It generally bars litigation over claims that the firm is not maximizing profit for shareholders, conferring the benefit of decreased litigation risk. Yet state benefit corporation laws cannot be categorized as a mandate, given the lack of strong accountability and enforcement mechanisms combined with the fact that a firm that has opted into the benefit corporation form can likewise opt back out of it.

In 2010, Maryland became the first state to adopt a benefit corporation statute,²⁵⁰ and by 2018, thirty-four states had adopted such laws.²⁵¹ A benefit corporation is a distinct legal entity from the typical corporation, and while the various state statutes are not identical, they share several common features regarding the corporation's purpose, accountability, and transparency, as many are based on model benefit corporation legislation.²⁵² First, these statutes govern either the initial incorporation of a firm or permit amendment to an *187 existing for-profit corporate charter.²⁵³ Second, to ensure notice to the public and shareholders, such laws generally require labeling of certain corporate documents, and in some cases the corporate name itself, to make clear that the firm is a benefit corporation.²⁵⁴ Third, the statutes generally require that the corporation pursue a “general public benefit,” which is defined as a “material, positive impact on society and the environment.”²⁵⁵ In addition, the statutes permit the corporation to identify and pursue “specific public benefits,” which can include, among other social goals, environmental protection.²⁵⁶ Fourth, *188 they require the directors of a benefit corporation to consider the effects of their actions not only on shareholders, but also on other stakeholders—including employees, customers, and the community—and to take account of “the local and global environment,” “the short-term and long-term interests of the benefit corporation,” and “the ability of the benefit corporation to accomplish its general public benefit purpose and any specific public benefit purpose.”²⁵⁷ Finally, the statutes assert that these articulated general and specific public benefits are “in the best interests of the corporation,” language that appears

to undermine any claim by shareholders that pursuing such goals would violate managers' fiduciary duties.²⁵⁸ The statutes specifically immunize directors from liability as long as they act to pursue these goals.²⁵⁹

As with any goal pursued unilaterally by a firm, there is a question about the firm's accountability with respect to its commitment to pursue a public benefit.²⁶⁰ The benefit corporation statutes generally provide for three mechanisms of enforcement. First, the statutes rely on the publication of an ***189** "annual benefit report" to track progress toward the firm's benefit commitments.²⁶¹ Second, the statutes delegate the task of assessing performance to third-party certification organizations. They generally require that a benefit corporation define its benefit according to a "comprehensive," "transparent," and "credible" "third-party standard" that has been "recognized ... for defining, reporting, and assessing corporate social and environmental performance."²⁶² B Lab, creator of the "B Corp" private certification standard and promulgator of the Model Benefit Corporation Legislation, is one such third-party certification organization.²⁶³

Finally, there is a judicial proceeding called a "benefit enforcement proceeding." This proceeding is generally the sole method by which shareholders may pursue legal action against the corporation or its directors for violations of the provisions of state benefit corporation law, such as failing to post a benefit report.²⁶⁴ However, beneficiaries of the general or specific benefit lack standing to enforce the firm's commitments.²⁶⁵ Only the ***190** corporation itself, a director, a shareholder meeting certain threshold criteria, or certain other listed individuals may bring an action.²⁶⁶

Despite these apparent positive incentives, however, this new corporate form has its critics. Some scholars raise a moral hazard argument, claiming that the rise of hybrid social enterprise with an explicit dual mission undermines the notion that the ordinary corporate form permits the exercise of managerial discretion to protect the environment.²⁶⁷ Others contend that the apparatus for verifying whether firms have met their environmental and social commitments is underdeveloped, leading to potential "greenwashing."²⁶⁸ Thus, state benefit corporation law acts as an incentive, encouraging firm managers to take into account environmental values and goals consistent with the environmental priority principle introduced below.²⁶⁹ It is not, however, a mandate.

E. Disincentives: Bankruptcy Law

Bankruptcy law has significant implications for the extent to which firms take into account environmental values and goals, both in deciding whether and how to comply with public environmental law and in deciding whether to go beyond compliance through private environmental governance. The Bankruptcy Code governs the reorganization or liquidation of firms whose assets are insufficient to cover their liabilities.²⁷⁰ In a liquidation proceeding, the operations of the debtor firm cease and a trustee is appointed or elected to distribute the firm's assets to creditors.²⁷¹ In contrast, a reorganization proceeding ends with the confirmation of a plan of reorganization and the discharge of pre-petition liabilities.²⁷²

***191** The overarching purpose of bankruptcy law--including its discharge provision--is to provide the debtor with a "fresh start" by permitting it to shed, in an orderly fashion, some of its existing liabilities and to ensure either the orderly winding down of the bankruptcy estate or the reorganization of the firm.²⁷³ The challenge, of course, is that this fresh start principle appears on its face to conflict with the imposition of liability on polluters to clean up their environmental contamination. Legal uncertainty surrounding the conflicting values of bankruptcy law and environmental law affects how parties bargain over environmental obligations in the shadow of bankruptcy.²⁷⁴ This Subpart contends that bankruptcy law operates as a disincentive, not only to full compliance with public environmental law obligations, but also to environmentally positive behavior that goes beyond compliance with the law.

While many scholars have discussed whether obligations under CERCLA (commonly known as the Superfund statute)²⁷⁵ or related state laws to clean up hazardous waste sites can be discharged as “claims” in bankruptcy,²⁷⁶ the implications of bankruptcy law in the climate change context have not yet received such sustained attention.²⁷⁷ This Subpart first spells out how the Bankruptcy Code acts as a disincentive by focusing on the CERCLA site cleanup context, and then broadens the argument to the context of climate change, in which litigation over these issues is only beginning to emerge.

In an ordinary CERCLA case, the EPA identifies a site at which hazardous substances were released; undertakes a preliminary site assessment; determines whether to list the site on the National Priorities List; conducts an investigation to characterize the nature of contamination at the site; and ultimately issues a Record of Decision that identifies the cleanup alternative to be adopted at the site, including its expected costs.²⁷⁸ The EPA also identifies *192 potentially responsible parties (PRPs) who may be liable under CERCLA.²⁷⁹ The EPA can either order a PRP to undertake the site cleanup under section 106 of CERCLA,²⁸⁰ or clean up the site itself and then seek response costs from the PRP under section 107.²⁸¹

If, however, a PRP files for bankruptcy prior to the completion of these steps, the process is short-circuited. The EPA may not yet have issued its final decision about how to clean up the site; assessed how much the cleanup will cost; identified all PRPs; or even determined whether releases of hazardous materials have occurred, a determination that triggers this process.²⁸² If the EPA fails to file a timely proof of claim in bankruptcy,²⁸³ the bankruptcy court can bar the EPA from ever recovering cleanup costs.²⁸⁴ Even if the EPA has completed the entire CERCLA process and has settled with the debtor under a consent decree--providing either that the debtor clean up the site itself or pay for cleanup costs--debtors may still argue that the bankruptcy proceeding and discharge bar the EPA from continuing to insist upon these remedies.²⁸⁵ And if the firm does not pay these costs or conduct the cleanup itself, it is ultimately the U.S. taxpayers who bear the costs instead.

It is worth taking a moment to address the magnitude of the issue. In a study of environmental liabilities in bankruptcy proceedings between 1998 and 2003, the Government Accountability Office (GAO) found a significant impact on the EPA's ability to recover funds for such cleanups, with an associated cost running into the billions of dollars.²⁸⁶ The GAO noted that while the EPA pursued environmental claims in 136 bankruptcy proceedings during that timeframe, the number of bankruptcies actually involving environmental *193 liabilities was likely much higher.²⁸⁷ The report concluded that by failing to mandate that businesses handling hazardous materials make assurances as to their ability to fund cleanups, the EPA was exposing U.S. taxpayers to “potentially enormous” costs.²⁸⁸

Moreover, the GAO study did not capture the scope or magnitude of environmental liabilities in more recent major bankruptcy filings, including those in the aftermath of the 2008 financial crisis.²⁸⁹ Such filings included the 2009 General Motors bankruptcy, which resulted in settlement agreements totaling more than \$899 million in cleanup costs to address significant environmental liabilities at more than one hundred Superfund sites nationwide.²⁹⁰ They also included the ASARCO bankruptcy, in which the United States and state environmental agencies settled their environmental claims for \$1.79 billion to address cleanups at over eighty sites nationwide.²⁹¹ In other words, much is at stake in these bankruptcy proceedings.

In many environmental bankruptcy cases, the EPA settles with PRPs for less than the amount filed in its original proof of claim.²⁹² In some cases, the value listed in the proof of claim may be the total cost of cleanup at the site, whereas the EPA ultimately settles with a PRP only for its proportionate share of the costs.²⁹³ In other cases, the proof of claim may reflect only an estimate of *194 cleanup costs if a final cleanup remedy has not yet been selected.²⁹⁴ Most relevant for this analysis, settlements always take into account litigation risk.

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

Uncertainty surrounding the status of certain environmental liabilities in bankruptcy proceedings likely affects the settlement negotiations in which these liabilities are resolved.²⁹⁵ This uncertainty, in connection with the conflict between bankruptcy law's discharge provisions and the "polluter pays" principle of environmental law, creates a disincentive for a firm pondering bankruptcy to bear the full costs of cleanup.

The legal uncertainty arises because the Bankruptcy Code permits only the discharge of a "debt."²⁹⁶ The Code defines a debt as a "liability on a claim."²⁹⁷ A "claim" is in turn defined, in somewhat tortured language, as either the "right to payment, whether or not such right is reduced to judgment, liquidated, unliquidated, fixed, contingent, matured, unmatured, disputed, undisputed, legal, equitable, secured, or unsecured"; or the "right to an equitable remedy for breach of performance if such breach gives rise to a right to payment, whether or not such right to an equitable remedy is reduced to judgment, fixed, contingent, matured, unmatured, disputed, undisputed, secured, or unsecured."²⁹⁸ The Second Circuit has held that when the EPA cleans up a site itself based on a pre-petition release of hazardous substances, and thereafter seeks reimbursement for those costs from the responsible party under section 107 of CERCLA, it has a "right to payment" that constitutes a claim.²⁹⁹ Even if the EPA has not yet incurred response costs, or "does not yet know the full extent of the hazardous waste removal costs" or "even know the location of all the sites at which such wastes may yet be found," one line of cases provides that this uncertainty merely renders these claims "contingent" and subject to *195 estimation in the bankruptcy proceeding, rather than not claims at all.³⁰⁰ At least one other court has been more protective of environmental priorities, holding that such cleanup costs must be within the "fair contemplation" of the parties to constitute contingent claims that can be discharged in bankruptcy.³⁰¹

With respect to injunctions ordering responsible parties to clean up Superfund sites,³⁰² however, the analysis is more complex. An injunctive order can accomplish multiple goals. On the one hand, it can order the debtor to clean up materials that have already been released--an obligation that the EPA alternatively could choose to undertake itself and then to seek response costs.³⁰³ On the other hand, an injunction can order a debtor to "end[] or ameliorate[] continued pollution" for which the EPA has "no option to accept payment in lieu of continued pollution."³⁰⁴ A third possibility is that the injunction does both.³⁰⁵

The Second, Third, and Seventh Circuits have made clear that an order that stops ongoing pollution is not a dischargeable claim.³⁰⁶ These rulings are consistent with the holding of *Ohio v. Kovacs*, in which the U.S. Supreme Court held that a state cleanup order against a debtor was a dischargeable claim because the state had obtained the appointment of a receiver to fulfill the cleanup order and sought only the payment of money from the debtor.³⁰⁷ Notably, the Court made clear that "anyone in possession" of a site must comply with applicable environmental laws: "Plainly, that person or firm may not maintain a nuisance, pollute the waters of the State, or refuse to remove the *196 source of such conditions."³⁰⁸ In *Midlantic National Bank v. New Jersey Department of Environmental Protection*,³⁰⁹ the Court made a similar statement of principle, clarifying that despite the provision of the Bankruptcy Code allowing a bankruptcy trustee to abandon burdensome property,³¹⁰ a trustee may not exercise this power if doing so would be in violation of law "that is reasonably designed to protect the public health or safety from identified hazards."³¹¹

In contrast, the Sixth Circuit in *United States v. Whizco, Inc.* offered a narrower view of when an injunctive obligation survives bankruptcy.³¹² In that case, the Department of the Interior sought to enforce an order under the Surface Mining Control and Reclamation Act (SMCRA)³¹³ against a Chapter 7 debtor to reclaim a mine that the debtor had abandoned, which posed an ongoing environmental hazard.³¹⁴ The government also sought enforcement against an individual agent of the debtor firm who had obtained a discharge of his debts in a Chapter 7 individual liquidation.³¹⁵ Unlike CERCLA, SMCRA provides no option for the government to perform the reclamation itself and then seek costs from the responsible party.³¹⁶ The Sixth Circuit nonetheless held that the

injunctive obligation against the individual had been discharged by his Chapter 7 proceeding: “[T]o the extent that fulfilling his obligation to reclaim the site would force the defendant to spend money, the obligation was a liability on a claim as defined by the Bankruptcy Code.”³¹⁷ Perhaps the best interpretation is that this language applies only to the case of an individual debtor who, unlike a firm, cannot himself undertake the cleanup work.³¹⁸ But *197 a firm subject to an injunction requiring it to expend money to perform cleanup, such as by hiring a contractor, could nonetheless rely on *Whizco*'s broad language to create uncertainty about whether the injunctive obligation survives the bankruptcy.³¹⁹

The potential for conflict between the Bankruptcy Code and environmental obligations is now emerging as an issue in climate change litigation. In April 2016, Peabody Energy and its affiliates filed bankruptcy petitions under Chapter 11.³²⁰ In March 2017, the bankruptcy court entered an order confirming Peabody's plan of reorganization and issued a discharge.³²¹ Within months after Peabody's plan of reorganization became effective, several local governments in California (the California plaintiffs) filed complaints under state nuisance law against Peabody, as well as other major fossil fuel producers, seeking damages for the defendants' past and ongoing contributions to climate change and sea level rise.³²² The complaints also sought injunctive relief to abate the ongoing nuisance allegedly caused by the defendants' continuing extraction and burning of fossil fuels.³²³

The bankruptcy court, however, held that any pre-petition claim that the local governments may have had was discharged in light of their failure to file a timely proof of claim in the bankruptcy proceeding.³²⁴ However, the court went beyond its conclusion that all claims regarding liability for climate change would be considered as pre-petition rather than as addressing ongoing harms because the complaint focused on the fifty-year period from 1965 to 2015. More expansively, the court asserted that “it defies common sense to believe human responsibility for climate change started after” the effective date *198 of the plan of reorganization.³²⁵ The court further determined that even if the plaintiffs' claims could be construed as arising after the effective date of the plan, when Peabody emerged from bankruptcy, such claims were also barred.³²⁶ The court reasoned that a bankruptcy settlement with the EPA that permitted ongoing enforcement of federal environmental laws related to mining activities by the reorganized debtor did not include any claims by the state relating to climate change.³²⁷

This opinion thus appears to immunize one of the world's largest private-sector coal companies from liability under state law for ongoing greenhouse gas emissions arising out of its current operations. To the extent that the *Peabody Energy* opinion suggests that a reorganized coal company cannot be held liable for any post-petition legal obligations to address climate change asserted by the state of California, the opinion appears to conflict with the mandate in *Kovacs* that a firm comply with the law to address ongoing, post-petition harm. Of course, whether California state law is the proper claim to raise against fossil fuel firms for damages, whether such claims must be pleaded under federal common law, and whether California law is preempted by the Clean Air Act are separate legal questions.³²⁸ But if the *Peabody Energy* opinion were to stand on appeal, it would most certainly create disincentives for firms to reduce their emissions.³²⁹ Instead, they could simply file for bankruptcy protection, reorganize, and escape all liability for the impacts of their conduct on climate change.

*199 Climate change implicates other provisions in the Bankruptcy Code as well. While a full treatment of all such issues is outside the scope of this Article, it is worth highlighting one other issue, namely, the ability of a debtor under § 363(f) to sell its assets “free and clear of any interest in such property of an entity other than the [bankruptcy] estate.”³³⁰ A purchaser of assets from the bankruptcy estate would, under this provision, be subject to its own obligation to clean up a contaminated property that posed ongoing environmental harm under the *Ohio v. Kovacs* standard.³³¹ However, the question has arisen as to whether the sale of assets under this section gives rise to successor environmental liability for the purchaser, or whether the debtor's unfulfilled environmental obligations are simply extinguished through the sale in bankruptcy.³³²

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

For example, La Paloma Generating Co. owned an electricity generating facility that was subject to California's Global Warming Solutions Act, an emissions trading regime.³³³ In 2016, La Paloma and its affiliates filed bankruptcy petitions, and the firm sought to sell its generating facility “free and clear” to a purchaser under § 363(f).³³⁴ La Paloma had already satisfied its obligations under California emissions trading law to surrender emissions allowances that were due prior to filing the bankruptcy petition.³³⁵ The issue arose, however, of whether the purchaser would be required as a successor to surrender the \$63 million in allowances that were due after the petition and after the sale, but that covered emissions for a three-year period during which La Paloma still owned and operated the facility.³³⁶ The court held that while the purchaser would acquire its own obligations to comply with California law *200 once it began operating the plant, it had no successor liability with respect to what would have been La Paloma's obligation to surrender the \$63 million in allowances.³³⁷ Accordingly, the obligation to surrender these allowances was simply extinguished.³³⁸

Bankruptcy law thus creates disincentives for firms to comply in full with environmental obligations. An environmental priority principle could alter these disincentives.

IV. A Holistic Approach

What I have aimed to show up to this point is that corporate law, securities law, antitrust law, and bankruptcy law already are environmental law. The influence of these fields on firms' environmental decisionmaking can be either positive or negative, in confluence or in conflict with environmental values. And there are different degrees of confluence and conflict, ranging from mandates and prohibitions at the outer edges of the spectrum, to more moderate incentives and disincentives, with safe harbors occupying a band of neutral space in the middle. In some cases, these laws intentionally seek to influence firms' decisionmaking with respect to environmental values and goals, as with SEC environmental disclosure rules or state benefit corporation laws. In other cases, however, these fields of law do not intentionally or explicitly address the potential synergies or tradeoffs between their underlying market-oriented values and environmental values. In such cases, the law of the corporation as environmental law operates as an unintentional, often negative, spillover effect.

In order to address significant environmental challenges like global climate change, the time has come to expand environmental law's paradigm. To complement the more traditional approach of directly regulating the externality coming out of a pipe or smokestack, an approach with only indirect effects on firms' decisionmaking, corporate and business law can more directly regulate firm behavior and market architecture--with indirect effects on what comes out of the pipe.³³⁹ This Part moves from the descriptive and the *201 analytical to the normative, contending that corporate and business law should make explicit what is currently implicit. These fields of law (or more properly, the institutions that adopt, enforce, amend, and interpret them) must grapple actively with environmental values as well as the tradeoffs between environmental values and efficiency. In other words, this Article calls for the integration of an environmental priority principle.

A. The Environmental Priority Principle

Taking a step back for a moment, it is important to understand the prominent positions that efficiency and welfare maximization hold in the legal landscape. Some scholars champion the value of maximizing social welfare as the overarching, first-order principle that should guide not only interpretation of the common law, but also standard setting in public law regulation.³⁴⁰ This efficiency-based normative approach is transsubstantive in nature and has infused many areas of the law, including traditional environmental law and regulation.³⁴¹ It undergirds much of the law governing the corporation, manifesting in concrete ideals such as shareholder value maximization, access to capital, competition, and market integrity, each of which is arguably an aspect of a well-functioning and efficient market. Perhaps the clearest statement of this overarching focus on efficiency and maximization of social

welfare at the federal level came in a series of executive orders which, since 1981, have required federal agencies to consider the costs and benefits of major regulatory actions.³⁴²

Others take an opposing view, countering that the law should be understood, as well as fashioned, to promote justice or fairness.³⁴³ General conceptions of justice can include environmental values and goals. For example, Douglas Kysar has argued that we should be concerned with protecting the environment not because of the balance of costs and benefits, *202 but for precautionary reasons relating to the duties that the present generation owes to future generations with respect to a fair distribution of environmental resources.³⁴⁴ Business ethicists have likewise posited that future generations and the environment itself are stakeholders or business participants whose interests firm managers must take into account. For example, Thomas Donaldson and James Walsh have argued that firms ought to be accountable to future generations.³⁴⁵ They contend that living is not a prerequisite for such accountability, as firms consider the future in their decisions every day.³⁴⁶

In the middle are those environmental law scholars who have sought to find an accommodation between efficiency (in the form of cost-benefit analysis) and justice, largely in the traditional regulatory context. Some advocate the “retaking” of rationality and cost-benefit analysis in ways that would be more consistent with environmental values and goals.³⁴⁷ Others have attempted to harmonize efficiency and environmental goals by arguing that pollution equals waste,³⁴⁸ or that “in a world of scarce resources, waste is ... immoral.”³⁴⁹ The management concept of “shared value” likewise suggests that firm managers can achieve better economic results by finding compatibilities between economic and social value, including environmental value.³⁵⁰

*203 The empirical evidence on the relationship between firms' sustainability performance and financial performance has been mixed. In some cases shared value exists, while in other cases there are tradeoffs between environmental and financial performance.³⁵¹ Recent scholarship by Robert Eccles and colleagues has critiqued some of the studies that failed to find a positive relationship between firms' environmental and financial performance on the basis that they did not measure financial performance over a sufficiently long time period.³⁵² Their recent study examined the internal management of firms between 1993 and 2009, and found significant differences between firms they designated as “high” and “low” sustainability companies.³⁵³ Characteristics that distinguished firms with a high voluntary commitment to sustainability included a longer time horizon for decisionmaking and an approach that sought to maximize “intertemporal profits.”³⁵⁴

Perhaps most significantly, their study also evaluated comparative measures of corporate financial performance over an eighteen-year period, finding that high sustainability firms achieved both higher stock market performance and accounting performance than did low sustainability firms.³⁵⁵ The authors concluded by suggesting that the key question is not “whether” a financial case can be made for sustainability, but rather “under what conditions and why” the financial link is present.³⁵⁶ A long-term time horizon may be crucial not only for environmental protection itself, but also for finding confluence between protecting the environment and promoting market values. And time horizon may be an area in which the institutions that interpret and enforce the law of the corporation have some flexibility.

*204 Yet while it may sometimes be possible to square the circle and find shared value, one must at least acknowledge that this is not always the case. Tradeoffs, which may be short-term in nature, are real.³⁵⁷ Keeping this in mind, there are, broadly speaking, three potential forms of a normative principle that would integrate environmental values more explicitly into the corporate context. The strongest form of such a principle—one might call it the “environmental absolutist principle”—would dictate that environmental values should be preserved above all other values at all times, and can never be outweighed by other considerations, including considerations about efficiency, human rights, market integrity, or other important values. There are two challenges for the strong form. As a normative matter, it may too easily sacrifice other first-order values like human dignity or autonomy.³⁵⁸

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

As a legal matter, it is not likely supported by current law. Nor is it likely that such an absolutist rule would be adopted as a matter of policy.

The weakest form of such a principle--what one might call the "environmental balancing principle"--would require only that the environment be a single factor among many that should be weighed in determining how to apply, interpret, or amend the fields of corporate and business law. The environment would be included in an overall mix of factors, but would garner no special weight. Environmental values could be outweighed by the balance of other factors, or even a strong showing on one factor, when competing values point in a different direction. *205 The challenge with the weak form, though it might be the least controversial to implement, is that it might not accomplish very much.

Perhaps not surprisingly, I offer here an intermediate form: the "environmental priority principle." This principle would require that the environment be valued as a first-order concern on par with efficiency and the related market-based considerations that underlie conventional accounts of the law of the corporation. When there is conflict, it would place weight on the scales in favor of promoting long-term environmental values and goals. The principle would require that environmental values not be outweighed in the absence of a strong showing both that some other measure of justice will be compromised, or a significant degree of efficiency or market functioning lost, and that the environmental values at stake are below some threshold. In other words, the principle would be limited by a degree of proportionality.³⁵⁹

This principle is consistent with a long-term perspective on our duties to future generations.³⁶⁰ Certain environmental resources--like clean and sufficient water, food, and a habitable planet--once degraded, cannot be replaced.³⁶¹ The environment warrants special precautionary protection, especially for irreversible and catastrophic harms like climate change.³⁶² *206 Consistent with this view, the legal code embedded within the architecture of firms and the marketplace should more expressly take into account the ecological limits of the planet and the needs of future generations.³⁶³

In practice, this priority principle would require drafters, enforcers, and interpreters to consider expressly the implications of laws on long-term environmental values and goals, rather than to rely on the mere happenstance that one of these fields might promote environmental goals in an individual case.³⁶⁴ Further, the principle would require that the relevant legal institutions search for confluence between environmental values and economic values to find areas of shared value. To accomplish this end, these institutions would need to take a long-term view of economic value. To the extent that there is conflict between economic and environmental values, however, the principle would prioritize the environment, while keeping in mind the need for a degree of proportionality.

Having spelled out this normative principle, the next Subpart addresses the mechanisms by which it can be integrated into the law.

B. Integrating the Principle into Law

Integrating this principle into the law is complex as an institutional matter because so many different institutions at the federal and state levels interpret, amend, and enforce the law of the corporation. These institutions are simply too diverse to allow for a one-size-fits-all approach. An approach directed solely at federal agencies to counter regulatory cost-benefit analysis,³⁶⁵ or only *207 at the courts,³⁶⁶ would not capture all of the relevant institutions. Each field of corporate and business law has distinct legal and institutional features. In some instances, integration could be possible through the interpretation of existing statutes, while in other cases, legislative change may be necessary. Thus, full integration of the principle would proceed in stages.

This Subpart first employs the analytical framework developed in Part II above to suggest general lessons that can apply broadly across fields of corporate and business law. It then offers a few concrete examples of how the

principle and framework would apply in each field, recognizing that more doctrinal work in this area remains to be done. Table 2 lays out the forms of interaction along a continuum.

Table 2

A Continuum from Conflict to Confluence

CONFLICT		NEUTRAL	CONFLUENCE	
Prohibitions	Disincentives	Safe harbors	Incentives	Mandates

The environmental priority principle would aim to move legal doctrines governing the corporation toward the right side of this spectrum. This approach is especially salient when the values underlying a field of corporate or business law (such as the “fresh start” principle in bankruptcy,³⁶⁷ or the mandate under Delaware corporate law that firms maximize shareholder profit in the takeover context³⁶⁸) are in conflict with environmental values. The analytical framework reveals, however--perhaps somewhat counterintuitively--that the priority principle can likewise play a role when the values underlying corporate and business law are neutral toward or in confluence with environmental values. In other words, the environmental priority principle could transform a safe harbor like the business judgment rule into an incentive, an incentive like a benefit corporation statute into a mandate, or a mandate like the SEC disclosure rules into an even stronger mandate. Consistent with the priority principle, at the very least, a first goal should be to move from prohibitions and disincentives to safe harbors. A longer-term approach should be to narrow the band of safe harbors, first moving them to incentives, and ultimately from incentives to mandates.

***208** While a legislative approach might be the most direct method for moving fields of corporate and business law along the spectrum, legislative change is unlikely in the current political environment. Expanded federal agency enforcement and interpretive action are similarly unlikely at this time.³⁶⁹ Therefore, aspects of this approach remain aspirational. Recognizing the political realities of today, there may be a significant role for federal courts, as well as state courts and legislatures, to play in integrating the environmental priority principle in the first instance. Thus, while the prescriptive recommendations set forth below include legislative action, they also include options that are available through interpretation of current statutory and regulatory schema.

Securities regulation: Securities regulation is an area in which statutory amendment would not be required to implement the environmental priority principle. As Cynthia Williams has demonstrated through her exhaustive analysis of the legislative history, securities laws are consistent with broader social and environmental disclosures, as long as such disclosures are material to a “reasonable investor.”³⁷⁰ Thus, the SEC could incorporate the environmental priority principle by interpreting materiality more broadly to encompass purely environmental materiality even in the absence of financial impact. In the current deregulatory environment, however, an expansive interpretation by the SEC is unlikely.³⁷¹

Antitrust: There would be several ways to integrate an environmental priority principle in the antitrust context. The principle could soften the per se rule from a prohibition to a safe harbor, or the rule of reason from a disincentive or prohibition to a safe harbor, through a number of different mechanisms. For instance, Congress could adopt

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

language creating an express safe harbor from antitrust enforcement if an industry's cooperative action promotes environmental benefits with only minimal harm to market competition. Even in the absence of congressional action, the courts could ***209** adopt such an interpretation. Antitrust law has often been described as a form of federal common law,³⁷² which gives the courts some leeway in interpreting how it applies in light of its purposes.³⁷³ If the purpose of a restraint on output is to protect the long-term sustainability of the resource--be it a fishery or the global climate--there may in fact be confluence between environmental and efficiency values.³⁷⁴ In such cases, a court could create a safe harbor from liability, even in the face of a showing of some modest, short-term anticompetitive effect.³⁷⁵

Bankruptcy: Congress could neutralize bankruptcy law's disincentive for environmental compliance into a safe harbor if it amended the Bankruptcy Code to clarify that environmental injunctive obligations are not dischargeable debts, or that successor environmental liability exists for asset sales.³⁷⁶ Alternatively, the courts may play a role in integrating the principle. Bankruptcy courts sit as courts of equity, often using their equitable powers to balance complex sets of interests among debtors, creditors, and the public.³⁷⁷ The courts could use these equitable powers to incorporate the environmental ***210** priority principle through broader interpretations of environmental obligations. At the very least, the courts must strictly follow *Ohio v. Kovacs* to recognize that ongoing liability for climate change is not a dischargeable debt.³⁷⁸ Such an approach might have altered the court's analysis in the Peabody bankruptcy, and could alter firms' incentives moving forward.³⁷⁹

Corporate law: State corporate law may be an important locus for experimentation with the environmental priority principle. The states may choose to act as "laboratories" of experimentation with respect to policies that may later spread to other states or to the federal government.³⁸⁰ Legislative change, rather than reinterpretation of existing law, would likely be required to integrate the principle into state corporate law. State legislatures could strengthen the ordinary business judgment rule into an incentive by requiring firm managers to identify and pursue general and specific environmental benefits alongside profit. In other words, they could transform all corporations within a given state into benefit corporations. States could likewise strengthen the benefit corporation form from an incentive into a mandate by strengthening enforcement mechanisms. For example, states could enforce public benefit commitments directly, authorize litigation by the intended beneficiaries, or strengthen benefit enforcement proceedings.³⁸¹

When states experiment with state law, there is of course a risk that firms may decline to incorporate in those states with more onerous legal requirements.³⁸² Anticipating this, states may be wary of adopting more stringent environmental or social standards for firms, which can contribute to a race-to-the-bottom dynamic.³⁸³ Yet the fact that thirty-four states have already adopted benefit corporation statutes,³⁸⁴ and that thirty-three have ***211** adopted constituency statutes,³⁸⁵ suggests that there may be at least some support for this approach. With respect to the impact of such a change on investors, one recent study concluded that institutional investors with strict fiduciary duties, such as public and private pension funds and endowments, did not significantly alter their investments in states that adopted constituency statutes.³⁸⁶

Despite the fact that integrating the environmental priority principle into these fields of positive law may require distinct mechanisms, a holistic approach to the priority principle is nonetheless valuable. As the automaker antitrust litigation and the European laundry detergent settlement make clear, firms may be reluctant to be the first mover if they perceive this to put them at a competitive disadvantage vis-à-vis their peers. Thus, even if incentives in corporate law or securities regulation promoted greater consideration of environmental values and goals by individual firms, changes directed at the individual-firm level may be insufficient on their own in light of countervailing influences. Any approach must likewise take into account how disincentives or prohibitions in antitrust law or bankruptcy law might counter those changes on an industry-wide or national scale. A field-by-field approach leaves open the potential for a game of environmental "Whac-a-Mole," in which one change improves environmental performance while countervailing forces of other doctrines impede progress.

A holistic approach to the cumulative harm of climate change would resemble the following. If securities regulations mandated fuller disclosure of climate performance and risks, this disclosure mandate would provide incentives for firms to incorporate climate considerations more actively into their decisionmaking and governance structures. If a firm were organized as a benefit corporation but failed to meet its climate targets, a more enforceable benefit corporation law would turn the incentive to meet climate targets into a mandate, ensuring greater accountability. If firms in an industry wanted to cooperate to develop industry standards to address climate change, an environmental priority approach to antitrust law would remove the disincentive for such cooperation, as long as the firms did not fix prices or violate other core principles of market competition. If a firm sought bankruptcy protection to avoid complying with its environmental duties, ***212** under the environmental priority principle a bankruptcy court would preclude the firm from discharging its ongoing obligations. Changes directed at the individual-firm level, when aggregated into the architecture of the market, could thus chip away at the cumulative harm of climate change. Each of these levers on firm behavior should be considered part of a holistic environmental toolkit moving forward.

C. Regulatory Pluralism in a Deregulatory Context

In ordinary times it is important to take a pluralistic approach with respect to environmental protection. But regulatory pluralism becomes all the more important in a deregulatory moment. When one institution at the federal level-- like the EPA--is subject to significant deregulatory pressure, it is worth looking beyond that core institution to other institutional actors to ensure that important values and goals are not underenforced. In some cases, these alternative institutions, like the SEC, may be subject to the same deregulatory pressures.³⁸⁷ In other cases, however, the alternative institutions stand entirely outside of the control of the federal government, as with states and corporate law.³⁸⁸ Thus, while it is unlikely at this moment in time that Congress would amend the relevant securities, antitrust, or bankruptcy statutes to integrate the environmental priority principle, or that the SEC would adopt a broader definition of materiality, other institutions may play an important role in the near term in interpreting and enforcing the law of the corporation as environmental law. As noted above, state legislatures and courts, as well as federal courts, may play a role in the first instance.



The focus on public institutions should not obscure the fact that private actors, including firms themselves, may likewise have a role to play in the law of the corporation as environmental law, a role that may be especially significant in a deregulatory environment. Firms and private actors are not merely passive recipients of positive law. They can actively shape these legal doctrines through their own commitments. The values that have shaped different legal doctrines have evolved over time. Tort law began as an exercise in assigning moral responsibility before the influence of the law and economics movement transformed its doctrines into engines for reducing the social costs of accidents.³⁸⁹ Constitutional standards for what constitutes cruel and unusual ***213** punishment under the Eighth Amendment have likewise changed over time to take into account “evolving standards of decency” in society.³⁹⁰ And one law and economics scholar has recently called for a focus on macro-rather than microeconomic concerns in corporate law during specific times in the business cycle.³⁹¹

Private firms and other private actors like stakeholder groups and NGOs have a significant role to play in shaping the norms that influence the law of the corporation.³⁹² This dynamic is most obvious in the SEC disclosure context. Increasing investor demand for social and environmental disclosure can influence the legal doctrine of materiality in a significant, direct way. The definition of materiality derives from what a reasonable investor seeks to understand about a firm before purchasing or trading its securities. In such cases, the private-sector influence on the development of the law may play an especially significant role in driving the integration of the environmental priority principle.

Conclusion

Environmental law, broadly construed, includes positive law governing the corporation and its behavior in the marketplace. Although traditional environmental law has achieved much success, it is ill-equipped to address fully the massive problems and cumulative harms that remain, like climate change. Expanding our understanding of environmental law to include these fields that are critical to its core will strengthen its ability to address such harms. And in a deregulatory environment, a pluralistic approach is especially important. The potential for these fields of law to operate in greater confluence with environmental values and goals is worthy of sustained focus within environmental law scholarship.

Footnotes

- a1 Assistant Professor of Legal Studies and Business Ethics, The Wharton School, University of Pennsylvania. Thanks to David Adelman, Vince Buccola, Cary Coglianese, Tom Donaldson, Herbert Hovenkamp, Bill Laufer, Richard Lazarus, Eric Orts, Diana Robertson, J.B. Ruhl, Jim Salzman, Amy Sepinwall, Richard Shell, Michael Vandenberg, Kevin Werbach, and David Zaring; and to participants in workshops at the University of Michigan Law School; the Searle Center on Law, Regulation, and Economic Growth at Northwestern University Law School; the Alliance for Research on Corporate Sustainability 10th Annual Conference at the MIT Sloan School of Management; the Yale-Stanford-Harvard Junior Faculty Forum at Harvard Law School; and the Vermont Law School Colloquium on Environmental Scholarship for discussions about early drafts of this Article. Thanks to Greg Arpino, Jane Tomic, and Stephanie Wu for excellent research assistance. Finally, special thanks to the superb editors of the *Stanford Law Review* for their thoughtful feedback on this Article.
- 1 See generally David P. Baron, *Private Politics*, 12 J. ECON. & MGMT. STRATEGY 31 (2003) (discussing the impact of activist boycotts on firm behavior); David P. Baron, *Private Politics, Corporate Social Responsibility, and Integrated Strategy*, 10 J. ECON. & MGMT. STRATEGY 7 (2001) (same); David P. Baron & Daniel Diermeier, *Strategic Activism and Nonmarket Strategy*, 16 J. ECON. & MGMT. STRATEGY 599, 600-01 (2007) (discussing “private regulation” by firms in response to activism).
- 2 Private firms have free speech rights, see  *First Nat'l Bank of Bos. v. Bellotti*, 435 U.S. 765, 784 (1978), and can make political contributions, see  *Citizens United v. FEC*, 558 U.S. 310, 365 (2010).
- 3 By “environmental values and goals,” I mean norms of protecting the natural environment from the risk of degradation, including long-term, potentially irreversible degradation caused by the cumulative small actions of many sources. See Richard J. Lazarus, *Restoring What's Environmental About Environmental Law in the Supreme Court*, 47 UCLA L. REV. 703, 744-48 (2000) (identifying the unique focus of environmental law as “ecological injury” that may be catastrophic and continuing in nature, distant in space or time, uncertain, generated by multiple causes, and not easily “susceptible to monetary valuation”).
- 4 See David Gelles, *Patagonia v. Trump*, N.Y. TIMES (May 5, 2018), <https://perma.cc/GM4W-3MTY>; see also Complaint for Declaratory and Injunctive Relief, *Utah Dine Bikeyah v. Trump*, No. 1:17-cv-02605 (D.D.C. Dec. 6, 2017), 2017 WL 6049363.
- 5 Private environmental governance comprises the “traditionally ‘governmental’ functions of environmental standard setting and enforcement that private actors, including business firms and non-governmental organizations (NGOs), adopt to address environmental concerns.” Sarah E. Light & Eric W. Orts, *Parallels in Public and Private Environmental Governance*, 5 MICH. J. ENVTL. & ADMIN. L. 1, 3 (2015); see also Sarah E. Light, *The New Insider Trading: Environmental Markets Within the Firm*, 34 STAN. ENVTL. L.J. 3, 6 & n.6 (2015) [hereinafter Light, *Insider Trading*] (discussing private carbon fees and emissions trading); Michael P. Vandenberg, *Private Environmental Governance*, 99 CORNELL L. REV. 129, 133 (2013) (arguing that private environmental governance is a form of environmental law). See generally MICHAEL P. VANDENBERGH & JONATHAN M. GILLIGAN, BEYOND POLITICS:

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

THE PRIVATE GOVERNANCE RESPONSE TO CLIMATE CHANGE (2017) (examining private environmental governance initiatives to address climate change).

6 Cf. NEIL GUNNINGHAM ET AL., SHADES OF GREEN: BUSINESS, REGULATION, AND ENVIRONMENT 35-38 (2003) (suggesting that a firm's "license to operate" sets boundaries within which regulatory, economic, and social demands influence firm behavior).

7 See Todd S. Aagaard, *Environmental Law Outside the Canon*, 89 IND. L.J. 1239, 1240-41 (2014) (identifying the "canonical" federal environmental statutes). For the six canonical statutes, see notes 45-50 below.

8 Positive law refers to law that has been enacted in "codes, statutes, and regulations that are applied and enforced in the courts." *Positive Law*, BLACK'S LAW DICTIONARY (10th ed. 2014). I focus here on environmental statutes and regulations that address pollution control, rather than those that address natural resources protection or land use.

9 Negative externalities are the social costs that a polluter (or any social actor) imposes on others, or costs that the producer does not fully bear or "internalize." Economist Arthur Pigou argued that a tax could force social actors to internalize negative externalities. See A.C. PIGOU, *THE ECONOMICS OF WELFARE* 185-88, 192-93 (4th ed. reprinted 1960) (discussing how "the State" can impose "bounties and taxes" to "remove the divergence" between "private and social net product"). Ronald Coase argued instead that in the absence of transaction costs and with perfect information, parties can bargain efficiently to achieve an optimal allocation of resources. See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 6-8 (1960).

10 Cf. Milton Friedman, *A Friedman Doctrine--The Social Responsibility of Business Is to Increase Its Profits*, N.Y. TIMES, Sept. 13, 1970, § 6 (Magazine), at 32, 33 (arguing that corporate actions to promote "general social interest[s]" impose an unrepresentative tax on shareholders).

11 Cf. Cary Coglianese & Jennifer Nash, *Management-Based Strategies: An Emerging Approach to Environmental Protection*, in *LEVERAGING THE PRIVATE SECTOR: MANAGEMENT-BASED STRATEGIES FOR IMPROVING ENVIRONMENTAL PERFORMANCE* 3, 6 (Cary Coglianese & Jennifer Nash eds., 2006) ("Policymakers and business leaders increasingly recognize that what goes on inside the black box of the organization is of critical importance for overall environmental quality.").

12 See *infra* Parts III.C-.D.


13 See *infra* Part III.A.1.

14 See *infra* Parts III.A.2, III.B.

15 See *infra* Part III.E.

16 See *infra* Part I.B; see also RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* 113-16 (2004); Aagaard, *supra* note 7, at 1264-68 (arguing that "embedded" environmental law exists in federal statutes outside of the environmental law canon); Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631, 658-91 (1986) [hereinafter Lazarus, *Changing Conceptions*] (describing how environmental values have infused the law of standing, property law, and administrative law, among other areas); Richard J. Lazarus, *Meeting the Demands of Integration in the Evolution of Environmental Law: Reforming Environmental Criminal Law*, 83 GEO. L.J. 2407, 2415-20 (1995) [hereinafter Lazarus, *Meeting the Demands*] (discussing the "assimilation" of environmentalism into many categories of legal rules, but noting the lack of integration of environmental values into criminal law); Richard J. Lazarus, *Pursuing "Environmental Justice": The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787, 853-55 (1993) [hereinafter Lazarus, *Pursuing "Environmental Justice"*] (discussing how civil rights laws can promote environmental justice); Richard J. Lazarus, Essay, *Putting the Correct "Spin" on Lucas*, 45

STAN. L. REV. 1411, 1421-25 (1993) (discussing the relationship among environmental values, property law, and the Takings Clause).

- 17 See, e.g., Cary Coglianese & David Lazer, *Management-Based Regulation: Prescribing Private Management to Achieve Public Goals*, 37 LAW & SOC'Y REV. 691, 696-700 (2003) (describing the use of “management-based regulation” in food safety, industrial safety, and pollution prevention); Cary Coglianese, *The Managerial Turn in Environmental Policy*, 17 N.Y.U. ENVTL. L.J. 54, 54-60 (2008) (discussing how environmental law can encourage firms to adopt environmental management systems); Daniel C. Esty, *Red Lights to Green Lights: From 20th Century Environmental Regulation to 21st Century Sustainability*, 47 ENVTL. L. 1 (2017) (advocating a shift in environmental governance to focus on positive goal-setting, not negative controls); Jody Freeman & Daniel A. Farber, *Modular Environmental Regulation*, 54 DUKE L.J. 795, 797-98 (2005) (noting that many tools at multiple levels of government are needed to protect the environment); Jody Freeman, *The Private Role in Public Governance*, 75 N.Y.U. L. REV. 543 (2000) (observing the pervasive role of private actors in public administration and examining the consequences for accountability); Eric W. Orts, *Reflexive Environmental Law*, 89 NW. U. L. REV. 1227 (1995) (identifying the European Union's approach to encouraging firms to adopt their own environmental management systems as “reflexive law”); Vandenberg, *Private Environmental Governance*, *supra* note 5, at 133 (arguing that private environmental governance is a form of law); Michael P. Vandenberg, *The Private Life of Public Law*, 105 COLUM. L. REV. 2029 (2005) [hereinafter Vandenberg, *Private Life*] (discussing how corporate transactions allocate environmental legal responsibility).
- 18 See Sarah E. Light, *Regulatory Horcruxes*, 67 DUKE L.J. 1647, 1655-62 (2018) (discussing how federal regulators can fragment environmental regulatory programs across other institutions, but not focusing on the law of the corporation). For related work, see Sarah E. Light, *The Military-Environmental Complex*, 55 B.C. L. REV. 879 (2014) (arguing that the Department of Defense's promotion of climate-positive technological innovation is an important environmental regulatory tool); and Light & Orts, *supra* note 5 (arguing that private environmental governance can complement public environmental law, but not addressing the influence of corporate or business law on private governance). See also Light, *Insider Trading*, *supra* note 5.
- 19 Richard Lazarus has come the closest in this regard, arguing that modern environmentalism has led to the “[g]reening” of many fields of U.S. law, and mentioning, but not discussing in depth, business law fields like corporate law, securities law, and bankruptcy law. See LAZARUS, THE MAKING OF ENVIRONMENTAL LAW, *supra* note 16, at 113-16; *cf. id.* at 188 (mentioning the underutilization of Securities and Exchange Commission (SEC) environmental disclosure rules). For a discussion of the interplay between the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and principles of limited liability for corporate parents in  *United States v. Bestfoods*, 524 U.S. 51 (1998), see Lazarus, *supra* note 3, at 757-59. I categorize this relationship as a “reversal.” See *infra* note 99.
- 20 As used in this Article, the term “business law” encompasses the fields of securities regulation, antitrust law, and bankruptcy law. These fields, in addition to state corporate law, influence the behavior of firms in the ways I discuss below. Although tax law clearly affects firms' environmental performance, it is not underappreciated in the environmental law literature. For work exploring this relationship, see, for example, Reuven S. Avi-Yonah & David M. Uhlmann, *Combating Global Climate Change: Why a Carbon Tax Is a Better Response to Global Warming than Cap and Trade*, 28 STAN. ENVTL. L.J. 3 (2009) (discussing carbon taxes); and Gilbert E. Metcalf & David Weisbach, *The Design of a Carbon Tax*, 33 HARV. ENVTL. L. REV. 499 (2009) (same). And while patent law governs incentives to develop new technologies with environmental implications, I omit it here because it applies broadly, including to entities that are not firms. For discussions of patents and climate change, see generally Carolyn Abbot & David Booton, *Using Patent Law's Teaching Function to Introduce an Environmental Ethic into the Process of Technical Innovation*, 21 GEO. INT'L ENVTL. L. REV. 219 (2009); Natalie M. Derzko, *Using Intellectual Property Law and Regulatory Processes to Foster the Innovation and Diffusion of Environmental Technologies*, 20 HARV.

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

ENVTL. L. REV. 3 (1996); and F. Scott Kieff, Essay, *Patents for Environmentalists*, 9 WASH. U. J.L. & POL'Y 307 (2002).

- 21 See Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. CHI. LEGAL F. 207, 207-08 (critiquing the proliferation of law school courses on “Law and” another field for failing to illuminate fundamental principles of law); see also Aagaard, *supra* note 7, at 1263 & n.147 (distinguishing “[e]mbedded environmental laws” from “mere[] overlap,” such as when “[b]ankruptcy law ... applies in circumstances in which environmental law also applies,” a fact that “does not by itself transform bankruptcy laws into environmental laws”).
- 22 See, e.g., Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 299-305 (1999) (discussing the responsibility of firms to a wider class of stakeholders); Einer R. Elhauge, *Corporate Managers' Operational Discretion to Sacrifice Corporate Profits in the Public Interest*, in ENVIRONMENTAL PROTECTION AND THE SOCIAL RESPONSIBILITY OF FIRMS: PERSPECTIVES FROM LAW, ECONOMICS, AND BUSINESS 13, 13-14 (Bruce L. Hay et al. eds., 2005) (arguing that corporate managers have “considerable implicit and explicit discretion to sacrifice profits in the public interest”); Judd F. Sneirson, *Green Is Good: Sustainability, Profitability, and a New Paradigm for Corporate Governance*, 94 IOWA L. REV. 987, 1017-20 (2009) (discussing B Corporations and an early effort in Oregon to authorize corporations to act in an environmentally and socially responsible manner); Perry E. Wallace, *Climate Change, Corporate Strategy, and Corporate Law Duties*, 44 WAKE FOREST L. REV. 757 (2009) (addressing Delaware corporate law and securities regulation as separate fields with environmental implications, but concluding that nonlegal influences will prove more influential on firm behavior). For an account of the legal bases for the capacity of firms to self-govern, see generally ERIC W. ORTS, *BUSINESS PERSONS: A LEGAL THEORY OF THE FIRM* 9-108 (2013).
- 23 On environmental law and bankruptcy law, see, for example, Douglas G. Baird & Thomas H. Jackson, Comment, *Kovacs and Toxic Wastes in Bankruptcy*, 36 STAN. L. REV. 1199 (1984) (discussing the effects of bankruptcy on prebankruptcy obligations to perform environmental cleanup); and Anne M. Lawton & Lynda J. Oswald, *Scary Stories and the Limited Liability Polluter in Chapter 11*, 65 WASH. & LEE L. REV. 451, 453-54 (2008) (examining whether and how firms use bankruptcy to escape environmental liability). On environmental law and corporate law, see, for example, Lazarus, *supra* note 3, at 758-59 (arguing that the Supreme Court prioritized corporate law limited liability rules over environmental values in *Bestfoods*); Lynda J. Oswald & Cindy A. Schipani, *CERCLA and the “Erosion” of Traditional Corporate Law Doctrine*, 86 NW. U. L. REV. 259 (1992) (arguing, before *Bestfoods*, that decisions interpreting CERCLA did not erode traditional corporate law principles of limited liability); and Vandenberg, *Private Life*, *supra* note 17, at 2079 (arguing that the Court in *Bestfoods* rejected the idea that CERCLA required corporate law to “be read to minimize the externalization of environmental liabilities”).
- 24 See Jonathan H. Adler, *Conservation Through Collusion: Antitrust as an Obstacle to Marine Resource Conservation*, 61 WASH. & LEE L. REV. 3 (2004) (identifying a conflict in the fisheries context between antitrust law's promotion of competition and the environmental goal of conservation through collective action); Inara Scott, *Antitrust and Socially Responsible Collaboration: A Chilling Combination?*, 53 AM. BUS. L.J. 97 (2016) (arguing that the threat of antitrust liability “chills” certain forms of environmental collaboration in private industry); cf. Barak D. Richman, *The Antitrust of Reputation Mechanisms: Institutional Economics and Concerted Refusals to Deal*, 95 VA. L. REV. 325 (2009) (advocating against a per se antitrust rule that would bar horizontal industry coordination, but not discussing coordination in the environmental context).
- 25 For the seminal work in this area, see Cynthia A. Williams, *The Securities and Exchange Commission and Corporate Social Transparency*, 112 HARV. L. REV. 1197 (1999) (arguing that the legislative history of securities law supports broader disclosure rules for environmental and social issues). See also James W. Coleman, *How Cheap Is Corporate Talk?: Comparing Companies' Comments on Regulations with Their Securities Disclosures*, 40 HARV. ENVTL. L. REV. 47 (2016) (studying empirically the differences between firms' comments to agencies about proposed regulations and their messages to investors in

securities disclosures); Esty, *supra* note 17, at 54-57 (observing that investors increasingly care about sustainability, and arguing that greater transparency about firms' sustainability metrics will enhance environmental performance); Jill E. Fisch, *Making Sustainability Disclosure Sustainable*, 107 GEO. L.J. 923 (2019) (manuscript at 7), <https://perma.cc/X7C9-VWPX> (proposing a required "sustainability discussion and analysis" section in firms' annual reports to address current weaknesses in SEC rules on sustainability disclosure); Virginia Harper Ho, *Nonfinancial Risk Disclosure and the Costs of Private Ordering*, 55 AM. BUS. L.J. 407, 443-56 (2018) (arguing that public law is superior to private governance when it comes to disclosure of certain nonfinancial information, including environmental impact); Perry E. Wallace, *Disclosure of Environmental Liabilities Under the Securities Laws: The Potential of Securities-Market-Based Incentives for Pollution Control*, 50 WASH. & LEE L. REV. 1093 (1993) (discussing the history of SEC environmental disclosure rules and accounting standards, and observing that increasing investor interest in environmental performance creates a new "lever" of market-based incentives for better performance).

- 26 For several significant contributions to the extensive business ethics literature, see Thomas Donaldson & Lee E. Preston, *The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications*, 20 ACAD. MGMT. REV. 65 (1995) (discussing the descriptive, instrumental, normative, and managerial implications of stakeholder theory); R. Edward Freeman, *A Stakeholder Theory of the Modern Corporation*, in *THE CORPORATION AND ITS STAKEHOLDERS: CLASSIC AND CONTEMPORARY READINGS* 125 (Max B.E. Clarkson ed., 1998) (arguing for a reconceptualization of the firm as owing duties to a broader class of stakeholders than just its shareholders); Eric W. Orts & Alan Strudler, *The Ethical and Environmental Limits of Stakeholder Theory*, 12 BUS. ETHICS Q. 215, 225 (2002) (arguing that stakeholder theory cannot capture the "external, non-stakeholder legal and moral obligations" of firm managers, which include protecting the environment); and Mark Starik, *Should Trees Have Managerial Standing?: Toward Stakeholder Status for Non-Human Nature*, 14 J. BUS. ETHICS 207 (1995) (arguing that nature is a stakeholder of the firm).

For significant contributions to the extensive management literature on what motivates firm managers to adopt environmental management practices, see Magali A. Delmas & Michael W. Toffel, *Organizational Responses to Environmental Demands: Opening the Black Box*, 29 STRATEGIC MGMT. J. 1027 (2008) (examining differences in how external influences are channeled through firms); Magali Delmas & Michael W. Toffel, *Stakeholders and Environmental Management Practices: An Institutional Framework*, 13 BUS. STRATEGY & ENV'T 209, 210 (2004) (arguing that institutional differences across firms influence their environmental management responses to stakeholder pressures); Andrew A. King & Michael J. Lenox, *Does It Really Pay to Be Green?: An Empirical Study of Firm Environmental and Financial Performance*, J. INDUS. ECOLOGY, Jan. 2001, at 105 (arguing that "when" it pays for a firm to be environmentally conscious is a more important question than "whether" such behavior pays); Andrew A. King & Michael J. Lenox, *Industry Self-Regulation Without Sanctions: The Chemical Industry's Responsible Care Program*, 43 ACAD. MGMT. J. 698 (2000) [hereinafter King & Lenox, *Self-Regulation*] (suggesting that opportunism by firms is a significant barrier to environmental self-regulatory regimes in the absence of strong sanctions); and Thomas P. Lyon & John W. Maxwell, *Corporate Social Responsibility and the Environment: A Theoretical Perspective*, 2 REV. ENVTL. ECON. & POL'Y 240 (2008) (examining how different forces affect firms' incentives to adopt environmental and social responsibility initiatives).

- 27 See *infra* Part IV.A.

- 28 Cf. Easterbrook, *supra* note 21, at 207-08 (critiquing a tendency in both legal scholarship and education toward "multidisciplinary dilettantism" rather than the study of "general rules" in core fields of law like torts, property, and commercial transactions); J.B. Ruhl & James Salzman, *Climate Change Meets the Law of the Horse*, 62 DUKE L.J. 975, 985 (2013) (arguing that a "law of climate change adaptation" could develop as a "procedural overlay" across other legal fields).

- 29 See *infra* Part IV.A (discussing the environmental priority principle); cf. World Comm'n on Env't & Dev., *Our Common Future*, ¶ 27, U.N. Doc. A/42/427, annex (1987) [hereinafter WCED Report] (defining development as sustainable when "it meets the needs of the present without compromising

the ability of future generations to meet their own needs”); DOUGLAS A. KYSAR, REGULATING FROM NOWHERE: ENVIRONMENTAL LAW AND THE SEARCH FOR OBJECTIVITY 150-75 (2010) (arguing that a precautionary approach to environmental law and sustainability requires including future generations within the community of membership).

- 30 Cf. Eric Biber, *Law in the Anthropocene Epoch*, 106 GEO. L.J. 1 (2017) (identifying cumulative harms, such as climate change, as significant challenges that will force change in constitutional, criminal, tort, property, administrative, and international law, but not addressing the law of the corporation); J.B. Ruhl & James Salzman, *Climate Change, Dead Zones, and Massive Problems in the Administrative State: A Guide for Whittling Away*, 98 CALIF. L. REV. 59, 75-79 (2010) (identifying climate change as a “complicated” case of cumulative harm).
- 31 Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (codified as amended in scattered sections of 42 U.S.C.).
- 32 Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 33 U.S.C. §§ 1251-1388 (2017)).
- 33 See, e.g., CHRISTOPHER VAN ATTEN & LILY HOFFMAN-ANDREWS, THE CLEAN AIR ACT'S ECONOMIC BENEFITS: PAST, PRESENT AND FUTURE (2010), <https://perma.cc/5CXP-LWRH> (summarizing studies); *Air Pollutant Emissions Trends Data*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/9JDN-6HTE> (last updated July 11, 2018) (to access data, click “View the live page,” then download “Average Annual Emissions” file) (providing datasets showing declines in air pollution from carbon monoxide, nitrogen oxide, PM2.5 (particulate matter 2.5 micrometers or less in diameter), sulfur dioxide, volatile organic compounds, and ammonia emissions in the decades leading up to 2017); *Our Nation's Air: Status and Trends Through 2016*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/BD5Z-5MXJ> (archived Nov. 11, 2018) (noting a 73% drop in six criteria air pollutants between 1970 and 2016).
- 34 See generally JAMES GUSTAVE SPETH, THE BRIDGE AT THE EDGE OF THE WORLD: CAPITALISM, THE ENVIRONMENT, AND CROSSING FROM CRISIS TO SUSTAINABILITY 17-66 (2008) (discussing major global environmental challenges).
- 35 See Kevin M. Stack & Michael P. Vandenbergh, *The One Percent Problem*, 111 COLUM. L. REV. 1385 (2011) (proposing that climate change can only be solved by reducing emissions from small-scale polluters, but identifying the obstacle that biases lead individuals to discount or ignore small values); see also Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244-45 (1968) (arguing that individuals have incentives to overuse public goods because they perceive their own negative impacts to be small).
- 36 See Aagaard, *supra* note 7, at 1297 (arguing that law beyond the canonical environmental statutes is critical in addressing climate change); Biber, *supra* note 30, at 22 (noting environmental law's failure to address nonpoint sources of pollution); Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1184-87 (2009) (describing the challenges climate change poses for environmental lawmaking); Ruhl & Salzman, *supra* note 30, at 65 (arguing that “[c]onventional policy approaches” to address environmental problems “have proven deeply inadequate”); cf. Douglas A. Kysar, *What Climate Change Can Do About Tort Law*, 41 ENVTL. L. 1, 3-4 (2011) (noting that tort law is not well equipped to address climate change).
- 37 See James Salzman, *Beyond the Smokestack: Environmental Protection in the Service Economy*, 47 UCLA L. REV. 411 (1999) (advocating a regulatory shift beyond smokestacks to address cumulative environmental harm); Michael P. Vandenbergh, *From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law*, 57 VAND. L. REV. 515, 537-84 (2004) (arguing that environmental law's focus on smokestacks inadequately accounts for individual contributions to cumulative environmental harm).

- 38 By focusing on laws that govern the firm, I do not intend to suggest that firms are either the sole source of environmental harm or its sole solution. Individuals and government entities are likewise important contributors to cumulative environmental harm, though they are outside the scope of this Article. For scholarship focusing on other polluting entities, see generally Katrina Fischer Kuh, *Capturing Individual Harms*, 35 HARV. ENVTL. L. REV. 155 (2011) (focusing on individuals); Light, *The Military-Environmental Complex*, *supra* note 18, at 881, 887-88 (focusing on the Department of Defense); Michael P. Vandenbergh & Anne C. Steinemann, *The Carbon-Neutral Individual*, 82 N.Y.U. L. REV. 1673 (2007) (individuals); and Vandenbergh, *supra* note 37 (individuals).
- 39 Firms operate in different economic sectors, and can take many forms, each of which may contribute to environmental degradation. *See, e.g.*, Sarah E. Light, *Precautionary Federalism and the Sharing Economy*, 66 EMORY L.J. 333, 365-70 (2017) (observing that ride-hailing platforms aggregate the small, cumulative impacts on the environment of individual rides, while acknowledging that studies do not demonstrate conclusively whether ride-hailing platforms have resulted in an increase or decrease in emissions); Salzman, *supra* note 37 (discussing the environmental implications of the rise of the service economy). Corporate law governs all corporations, whether publicly traded or privately held, while antitrust law applies more broadly, covering noncorporate market participants as well. Securities regulations, however, govern only publicly traded firms. *See infra* text accompanying notes 114-17.
- I acknowledge that some firms falling outside the scope of the law governing the corporation as defined here play a role in causing cumulative harms, such as local dry cleaners or small farms. The ideas in this Article may be extended to other areas of the law to address these regulatory targets. In other words, while the law of the corporation can supplement, improve upon, and reduce impediments to the effectiveness of traditional environmental law, I do not suggest that it can replace other forms of environmental law entirely.
- 40 *See Climate Deregulation Tracker*, COLUM. L. SCH. SABIN CTR. FOR CLIMATE CHANGE L., <https://perma.cc/4EFR-VGCB> (archived Oct. 20, 2018) (listing environmental deregulatory actions by the EPA and Congress since January 2017); *EPA Deregulatory Actions*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/XA6H-FRBR> (last updated Oct. 17, 2018) (compiling a list of deregulatory efforts); Nadja Popovich et al., *78 Environmental Rules on the Way Out Under Trump*, N.Y. TIMES (updated Dec. 19, 2018), <https://perma.cc/NWQ9-ULU7>.
- 41 *See infra* Part IV.
- 42 *See, e.g.*, Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 599-613 (1996) (using the “generation” paradigm to trace the development of environmental law); Richard J. Lazarus, Essay, *The Greening of America and the Graying of United States Environmental Law: Reflections on Environmental Law’s First Three Decades in the United States*, 20 VA. ENVTL. L.J. 75 (2001) (discussing three “generations” of environmental law); Richard B. Stewart, Essay, *A New Generation of Environmental Regulation?*, 29 CAP. U. L. REV. 21 (2001). There were, of course, intermediate steps. *See* ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 89 (7th ed. 2013) (identifying six stages in the development of environmental law).
- 43 *See, e.g.*, Zygmunt J.B. Plater, Lecture, *Environmental Law in the Political Ecosystem--Coping with the Reality of Politics*, 19 PACE ENVTL. L. REV. 423, 427 n.9 (2002) (“Is this the third generation of environmental law, or the fourth, or fifth?”).
- 44 *See, e.g.*, Robert V. Percival, *Regulatory Evolution and the Future of Environmental Policy*, 1997 U. CHI. LEGAL F. 159, 161-67.
- 45 Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (codified as amended in scattered sections of 42 U.S.C.).

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

- 46 Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 33 U.S.C. §§ 1251-1388 (2017)).
- 47 National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347 (2017)).
- 48 Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (codified as amended at 16 U.S.C. §§ 1531-1544 (2017)).
- 49 Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended at 42 U.S.C. §§ 9601-9675).
- 50 Resource Conservation and Recovery Act of 1976, Pub. L. No. 94-580, 90 Stat. 2795 (codified as amended in scattered sections of 42 U.S.C.).
- 51 See PERCIVAL ET AL., *supra* note 42, at 93-94 (listing these and other significant statutes); Aagaard, *supra* note 7, at 1240 (identifying these six statutes as forming the “canon” of environmental law).
- 52 See Vandenberg, *Private Life*, *supra* note 17, at 2034-35 (observing the significant effect of environmental law on broader administrative law doctrine). The decision to consolidate most environmental enforcement into the EPA, rather than to leave enforcement and interpretive power fragmented across agencies, was a conscious one. See LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW*, *supra* note 16, at 69.
- 53 See, e.g., Vandenberg, *Private Environmental Governance*, *supra* note 5, at 131. In 2016, however, Congress significantly amended the Toxic Substances Control Act. See Frank R. Lautenberg Chemical Safety for the 21st Century Act, Pub. L. No. 114-182, 130 Stat. 448 (2016) (codified in scattered sections of the U.S. Code). For the original Toxic Substances Control Act, see Pub. L. No. 94-469, 90 Stat. 2003 (1976) (codified as amended at 15 U.S.C. §§ 2601-2697 (2017)).
- 54 For a series of essays discussing the effectiveness of market-leveraging instruments as compared to more traditional regulations, see MOVING TO MARKETS IN ENVIRONMENTAL REGULATION: LESSONS FROM TWENTY YEARS OF EXPERIENCE (Jody Freeman & Charles D. Kolstad eds., 2007). See also Bruce A. Ackerman & Richard B. Stewart, Comment, *Reforming Environmental Law*, 37 STAN. L. REV. 1333, 1342-46 (1985) (advocating market-based mechanisms); Richard B. Stewart, *Regulation, Innovation, and Administrative Law: A Conceptual Framework*, 69 CALIF. L. REV. 1256, 1326-38 (1981) (same). But see Howard Latin, *Ideal Versus Real Regulatory Efficiency: Implementation of Uniform Standards and “Fine-Tuning” Regulatory Reforms*, 37 STAN. L. REV. 1267 (1985) (defending the use of prescriptive rules). Of course, even some early environmental statutes like NEPA employed nonprescriptive tools like informational regulation. See *infra* notes 122-26 and accompanying text.
- 55 See, e.g., *infra* text accompanying notes 121-22 (discussing NEPA’s information disclosure requirements).
- 56 33 U.S.C. § 1311(a) (2017).
- 57 *Id.* § 1362(12).
- 58 See sources cited *supra* note 37.
- 59 See Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 401, 104 Stat. 2399, 2584-631 (codified at 42 U.S.C. §§ 7651-7651o (2017)).

- 60 It is debatable whether this scholarship should be characterized as describing a third generation, *see* Stewart, *supra* note 42, at 151-52 (describing new methods of regulation as a “third generation strategy”), or perhaps as an effort to move away from the paradigm of generations entirely.
- 61 *See* ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 48-49, 57 (1991) (finding that neighbors use social norms, not legal rules, to resolve disputes); ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 1-28 (reprt. 1992) (identifying collective action by insiders as a solution to the tragedy of the commons); Robert C. Ellickson, *Of Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County*, 38 STAN. L. REV. 623, 672-85 (1986) (describing how cattle ranchers in Shasta County, California, developed social norms instead of relying on the law of nuisance or trespass); *see also* Light & Orts, *supra* note 5, at 2-12, 3 nn.2-3, 11 n.34 (arguing that the “regulator” can be a private actor); Vandenbergh, *Private Environmental Governance*, *supra* note 5, at 137-38 (same).
- 62 *See* Orly Lobel, *The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought*, 89 MINN. L. REV. 342, 343-44 (2004).
- 63 *See* Jody Freeman, *Collaborative Governance in the Administrative State*, 45 UCLA L. REV. 1 (1997).
- 64 *See* IAN AYRES & JOHN BRAITHWAITE, RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE (1992).
- 65 *See* Freeman & Farber, *supra* note 17.
- 66 *See* Orts, *supra* note 17; *see also* Salzman, *supra* note 37.
- 67 *See* Coglianese & Lazer, *supra* note 17. In management-based regulation, either the state or private actors can encourage or require firms to adopt environmental management systems or other internal programs. *See* Coglianese & Nash, *supra* note 11, at 12-14, 14 fig.1-1 (offering a typology of four management-based strategies which they characterize as “regulations,” “mandates,” “incentives,” or “pressures” depending upon whether the institution imposing the strategy is a public regulator or private institution, and whether the institution mandates or merely encourages firms to adopt the internal system). These obligations are distinct from those imposed by ordinary corporate, securities, antitrust, and bankruptcy law.
- 68 *See* Cary Coglianese & Jennifer Nash, *Performance Track's Postmortem: Lessons from the Rise and Fall of EPA's "Flagship" Voluntary Program*, 38 HARV. ENVTL. L. REV. 1 (2014) (surveying the EPA's voluntary programs and concluding that Performance Track failed to achieve significant environmental gains); *see also* Lyon & Maxwell, *supra* note 26, at 246 (discussing negotiations between firms and regulators over voluntary environmental agreements).
- 69 *See supra* note 5.
- 70 For more on second-order agreements, *see* Vandenbergh, *Private Life*, *supra* note 17. *See also id.* at 2030 (“[T]he regulatory administrative state is profoundly influenced not just by public regulations or public-private agreements entered into in lieu of public regulations, but by agreements entered into between regulated firms and other private actors in the shadow of public regulations.” (citing Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L.J. 950, 952-56 (1979))).
For a description of supply-chain contracting as environmental governance, *see* Michael P. Vandenbergh, *The New Wal-Mart Effect: The Role of Private Contracting in Global Governance*, 54 UCLA L. REV. 913 (2007).
On the concept of “environmental contracts” generally, *see* Geoffrey C. Hazard, Jr. & Eric W. Orts, *Environmental Contracts in the United States*, in ENVIRONMENTAL CONTRACTS: COMPARATIVE APPROACHES TO REGULATORY INNOVATION IN THE UNITED STATES AND EUROPE 71 (Eric

W. Orts & Kurt Deketelaere eds., 2001); and Eric W. Orts, *Climate Contracts*, 29 VA. ENVTL. L. REV. 197 (2011) (defending a pluralistic account of the tools needed to address climate change).

71 See Aagaard, *supra* note 7, at 1264-65 (identifying the phenomenon of “embedded” environmental law); see also Lazarus, *Meeting the Demands*, *supra* note 16, at 2438-39 (noting that agencies other than the EPA “possess significant regulatory authority over environmental protection”).

72 See Lazarus, *Meeting the Demands*, *supra* note 16, at 2415 (defining assimilation as “the process by which a new set of priorities and information simultaneously influence different legal sectors, restructuring equilibria that underlie a host of legal rules in disparate contexts,” and defining integration as “the evolutionary process within any one discrete area of law”).

73 See Lazarus, *Changing Conceptions*, *supra* note 16, at 658; Lazarus, *Meeting the Demands*, *supra* note 16, at 2418-19; see also Lazarus, *Pursuing “Environmental Justice,” supra* note 16, at 834-42.

74 See sources cited *supra* note 18.

75 See Lawrence Lessig, Essay, *The New Chicago School*, 27 J. LEGAL STUD. 661, 662-67 (1998).

76 *Id.* at 662-63. Lessig acknowledges that the categories can be interdependent. See *id.* at 663-64, 664 fig.1.

77 See *id.* at 666-67, 667 fig.2. The distinction between “direct” and “indirect” regulation is imprecise, see *id.* at 671 n.35, but a strict boundary is not central to the argument here. For more on this distinction, see PHILIPPA FOOT, *The Problem of Abortion and the Doctrine of the Double Effect* (1967), in VIRTUES AND VICES AND OTHER ESSAYS IN MORAL PHILOSOPHY 19 (1978).

78 See Light & Orts, *supra* note 5, at 13 tbl.1 (offering a taxonomy of tools of public law and private governance); Carol M. Rose, *Rethinking Environmental Controls: Management Strategies for Common Resources*, 1991 DUKE L.J. 1, 9-10 (citing Steven N.S. Cheung, *The Structure of a Contract and the Theory of a Non-Exclusive Resource*, 13 J.L. & ECON. 49, 64 (1970)) (listing four tools for managing common pool resources); James Salzman, *Teaching Policy Instrument Choice in Environmental Law: The Five P's*, 23 DUKE ENVTL. L. & POL'Y F. 363 (2013) (describing five categories of public policy instruments); see also Jonathan Baert Wiener, *Global Environmental Regulation: Instrument Choice in Legal Context*, 108 YALE L.J. 677 (1999) (discussing the selection of public policy instruments in the global context).

79 In contrast to recycled material, “virgin material” is sourced directly from nature and has “not been previously used or consumed, or subjected to processing other than for its original production.” *Virgin Material*, BUSINESSDICTIONARY, <https://perma.cc/UC8G-68U8> (archived Oct. 20, 2018).

80 *Cf., e.g.*, 42 U.S.C. § 6962(c) (2017) (requiring agencies to “procure such items composed of the highest percentage of recovered materials practicable”). See generally Sarah E. Light & Eric W. Orts, *Public and Private Procurement in Environmental Governance*, in POLICY INSTRUMENTS IN ENVIRONMENTAL LAW (Kenneth Richards & Josephine van Zeven eds., forthcoming 2019), <https://perma.cc/J84V-GF33> (discussing the history of environmental procurement policies in the United States).

81 *Cf., e.g.*, 40 C.F.R. § 261.4(a)(8) (2018) (excluding from the definition of “solid wastes” certain “[s]econdary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process”).

82 *Cf., e.g.*, MASS. GEN. LAWS ch. 94, §§ 321-327 (2018) (Massachusetts's deposit refund scheme for beverage containers).

83 In Portland, Oregon, for instance, recycling is picked up weekly while garbage is collected only every other week. *Compare Portland Recycles!*, CITY OF PORTLAND OR., <https://perma.cc/3ERP-FB8K>

(archived Oct. 20, 2018), with *Garbage Collection*, CITY OF PORTLAND OR., <https://perma.cc/3NA3-U3P3> (archived Oct. 20, 2018).

84 See Ann E. Carlson, *Recycling Norms*, 89 CALIF. L. REV. 1231, 1235 (2001) (noting a New York City campaign during World War II to encourage recycling “for patriotic reasons”).

85 See Light & Orts, *supra* note 5, at 23-53 (arguing that private entities employ the same tools as public regulators in parallel, if not identical, ways).

86 For example, to combat the problem of electronic waste, retailer Best Buy runs a program in which it takes back used appliances and electronics regardless of whether they were initially purchased at Best Buy. See *Electronics and Appliances Recycling at Best Buy*, BEST BUY, <https://perma.cc/7HEQ-U8RW> (archived Oct. 20, 2018).

87 See *supra* notes 20-26 and accompanying text. *But see supra* note 19.

88 For some popular environmental law casebooks, see HOLLY DOREMUS ET AL., ENVIRONMENTAL POLICY LAW: PROBLEMS, CASES, AND READINGS (6th ed. 2012); DANIEL A. FARBER & ANN E. CARLSON, ENVIRONMENTAL LAW: CASES AND MATERIALS (9th ed. 2014); PERCIVAL ET AL., *supra* note 42; and RICHARD L. REVESZ, ENVIRONMENTAL LAW AND POLICY (3d ed. 2015).

89 See generally sources cited *supra* note 88.

90 See PERCIVAL ET AL., *supra* note 42, at 52; REVESZ, *supra* note 88, at 16-17; see also *supra* note 61 and accompanying text.

91 See generally sources cited *supra* note 88.

92 See DOREMUS ET AL., *supra* note 88, at 468; FARBER & CARLSON, *supra* note 88, at 959-63; PERCIVAL ET AL., *supra* note 42, at 1335-37; see also Matthew Morreale, *Corporate Disclosure Considerations Related to Climate Change*, in GLOBAL CLIMATE CHANGE AND U.S. LAW 205 (Michael B. Gerrard & Jody Freeman eds., 2d ed. 2014) [hereinafter GLOBAL CLIMATE CHANGE AND U.S. LAW (2014 ed.)] (discussing SEC disclosures, voluntary disclosures, and proxy disclosures); Jeffrey A. Smith & Matthew Morreale, *Disclosure Issues*, in GLOBAL CLIMATE CHANGE AND U.S. LAW 453, 454-80 (Michael B. Gerrard ed., 2007) [hereinafter GLOBAL CLIMATE CHANGE AND U.S. LAW (2007 ed.)] (same). Notably, while the 2007 edition of *Global Climate Change and U.S. Law*, published by the American Bar Association Section of Environment, Energy, and Resources, also included a chapter on fiduciary duties, see Jeffrey A. Smith & Matthew Morreale, *The Fiduciary Duties of Officers and Directors*, in GLOBAL CLIMATE CHANGE AND U.S. LAW (2007 ed.), *supra*, at 497, the second edition in 2014 omitted this chapter, see generally GLOBAL CLIMATE CHANGE AND U.S. LAW (2014 ed.), *supra*.

93 Thanks to Richard Lazarus for raising this point. It is of course also possible that faculty using such casebooks assign additional readings on these fields of law.

94 See *supra* notes 79-86 and accompanying text.

95 See *infra* Part III.A.1. See generally RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 189-91 (2008) (offering examples, including some in the environmental context, of information disclosure rules that achieved substantial reductions in harmful behavior); Daniel C. Esty, *Environmental Protection in the Information Age*, 79 N.Y.U. L. REV. 115, 162-70 (2004) (discussing the potential for greater informational transparency to promote greater visibility of environmental harms, improved modeling, better benchmarking, and ultimately changes in consumer behavior); Paul R. Kleindorfer & Eric W. Orts, *Informational Regulation of Environmental Risks*, 18 RISK ANALYSIS 155, 156 (1998) (defining informational regulation as “any regulation which provides to third parties information on company operations”); Sarah E. Light, *NEPA’s*

Footprint: Information Disclosure as a Quasi-Carbon Tax on Agencies, 87 TUL. L. REV. 511, 519-31 (2013) (discussing how information disclosure influences environmental decisionmaking in the climate change context). *But see* OMRI BEN-SHAHAR & CARL E. SCHNEIDER, MORE THAN YOU WANTED TO KNOW: THE FAILURE OF MANDATED DISCLOSURE (2014) (critiquing mandatory disclosure as a form of regulation).

96 *See infra* Part III.C.

97 *See infra* Part III.B.

98 *See infra* Part III.E.

99 There is one additional relationship between environmental law and corporate and business law and that I exclude from my analysis here--*reversals*. Reversals occur when a traditional environmental statute amends a bedrock principle of corporate or business law, such as how CERCLA affects principles of limited liability for a corporate parent with respect to its subsidiary. *See generally* Oswald & Schipani, *supra* note 23 (summarizing critiques of CERCLA on this account but finding them to be misguided); Cindy A. Schipani, *The Changing Face of Parent and Subsidiary Corporations: Enterprise Theory and Federal Regulation*, 37 CONN. L. REV. 691 (2005) (examining whether CERCLA and the Employee Retirement Income Security Act (ERISA) change the liability of a parent corporation for the acts of its subsidiaries); Perry E. Wallace, Jr., *Liability of Corporations and Corporate Officers, Directors and Shareholders Under Superfund: Should Corporate and Agency Law Concepts Apply?*, 14 J. CORP. L. 839 (1989) (examining the impact of CERCLA on traditional corporate law doctrines regarding parent-subsidiary liability, liability of individual corporate officers, and shareholder liability); Douglas A. Henderson, Comment, *Environmental Law as Corporate Law: Parent-Subsidiary Liability Under CERCLA and the Kayser-Roth Aftermath*, 7 J. MIN. L. & POL'Y 293 (1991-1992) (examining the impact of CERCLA on parent-subsidiary liability). Because this Article addresses how corporate and business law constitute fundamental aspects of environmental law rather than the other way around, reversals are outside this Article's scope.

100 *See infra* Part III.A.2. While an order not to collude could be characterized as a *prohibition* on collusion rather than an environmental *mandate*, I conceptualize these categories in relation to their promotion of environmental values and goals. Because the order breaking up the collusive agreement among automakers mandated that the firms make environmentally positive technology available, it is characterized as a mandate.

101 *See infra* Part III.B.

102 *See infra* notes 233-38 and accompanying text.

103 *See infra* note 238 (discussing the duties of firm directors in the takeover context under Delaware law).

104 *See infra* notes 233-38 and accompanying text.

105 *See infra* Part III.C.

106 *See infra* Part III.E.




107 *See infra* Part III.B.

108 *See infra* Part III.D.

109 *See infra* notes 260-66 and accompanying text.





110 *See infra* Part III.A.1.


111 *See supra* Part I.A.

- 112 See sources cited *supra* note 25; *cf.* Aagaard, *supra* note 7, at 1271 (describing SEC environmental disclosure requirements as “embedded environmental law”); Light, *Regulatory Horcruxes*, *supra* note 18, at 1664-65 (identifying SEC environmental disclosure obligations as regulatory “horcruxes”). For more on horcruxes, see generally J.K. ROWLING, HARRY POTTER AND THE HALF-BLOOD PRINCE 492-512 (2005).
- 113 See Harper Ho, *supra* note 25, at 415 (“Since federal reporting requirements only require disclosure of material information, ... [w]hether nonfinancial information is material is therefore a critical threshold matter for any consideration of disclosure reform.”); *cf.* Williams, *supra* note 25, at 1263-68 (discussing how broadly the SEC construes materiality in different contexts).
- 114  Basic Inc. v. Levinson, 485 U.S. 224, 230 (1988) (citing S. REP. NO. 73-792, at 1-5 (1934)).
- 115 Pub. L. No. 73-22, tit. I, 48 Stat. 74, 74-92 (codified as amended at 15 U.S.C. §§ 77a-77aa (2017)).
- 116 Pub. L. No. 73-291, 48 Stat. 881 (codified as amended in scattered sections of 15 U.S.C.).
- 117 For the current regulation, see 17 C.F.R. §§ 229.10-.1208 (2018). See also  Adoption of Integrated Disclosure System, Securities Act Release No. 6383, Exchange Act Release No. 18,524, Investment Company Act Release No. 12,264, 47 Fed. Reg. 11,380 (Mar. 16, 1982) (codified as amended in scattered sections of 17 C.F.R.) (announcing the adoption of a comprehensive disclosure system, including expansion and reorganization of Regulation S-K).
- 118 See Commission Guidance Regarding Disclosure Related to Climate Change, 75 Fed. Reg. 6290, 6293-95 (Feb. 8, 2010) [hereinafter SEC 2010 Climate Guidance] (footnote omitted).
- 119 See *id.*
- 120 See *id.* at 6295-97.
- 121 See sources cited *supra* note 95.
- 122 See Light, *supra* note 95, at 531-35; see also National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at  42 U.S.C. §§ 4321-4347 (2017)).
- 123 See generally THALER & SUNSTEIN, *supra* note 95, at 188-96 (discussing how disclosure of information about energy use, chemical releases, and other environmental impacts can focus managerial or consumer attention on acts that would otherwise be invisible, and how such disclosures have reduced negative environmental impacts).
- 124 See Shameek Konar & Mark A. Cohen, *Information as Regulation: The Effect of Community Right to Know Laws on Toxic Emissions*, 32 J. ENVTL. ECON. & MGMT. 109, 123 (1997) (“Firms with the largest negative stock price effects following announcement of their TRI emissions were found ... to subsequently reduce their TRI emissions more than other firms in their industry ...”); *Introduction to the 2016 TRI National Analysis*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/PF3T-FTJ4> (last updated Jan. 24, 2018) (reporting that since 2006, air releases of TRI chemicals dropped by 58%, and that in 2016, 87% of the TRI chemicals in production-related waste was recycled, treated, or used for energy recovery, rather than disposed of or released into the environment). *But see* Lori S. Benneer, *What Do We Really Know?: The Effect of Reporting Thresholds on Inferences Using Environmental Right-to-Know Data*, 2 REG. & GOVERNANCE 293 (2008) (cautioning, based on a study of a Massachusetts program similar to the TRI program, that some scholars may have overestimated decreases in chemical releases because firms stop reporting when their releases fall below reporting thresholds, even when those releases do not fall to zero). For an excellent discussion of the TRI program in general, see JAMES T.










THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

HAMILTON, REGULATION THROUGH REVELATION: THE ORIGIN, POLITICS, AND IMPACTS OF THE TOXICS RELEASE INVENTORY PROGRAM (2005).

- 125 See Bradley C. Karkkainen, *Information as Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 GEO. L.J. 257, 294-328 (2001).
- 126 See *id.* at 323-24.
- 127 Cf. Esty, *supra* note 17, at 64 (noting that investors increasingly care about corporate sustainability); Harper Ho, *supra* note 25, at 420-23 (same).
- 128 See SEC Probes Exxon's Climate, Reserves Accounting: Report, REUTERS (Sept. 20, 2016, 10:40 AM), <https://perma.cc/V5HT-RC2K>.
- 129 See *id.*
- 130 See Geoffrey Smith, *Exxon's Big Oil Sands Write-Off Could Help It Dodge SEC Troubles*, FORTUNE (Feb. 23, 2017), <https://perma.cc/8HYH-WQ9T>. On August 2, 2018, the SEC notified ExxonMobil that it had concluded its investigation relating to climate disclosure and that it “d[id] not intend to recommend an enforcement action.” Exxon Mobil Corp., SEC No-Action Letter (Aug. 2, 2018), <https://perma.cc/L4KW-445U>; see also Claire Ballentine, *Inquiry Ends into Exxon Mobil's Accounting Tied to Climate Change*, N.Y. TIMES (Aug. 3, 2018), <https://perma.cc/ZGC7-C47N>.
- 131 See Exxon Mobil Corp., Current Report (Form 8-K), item 7.01, at 2 (Dec. 11, 2017).
- 132 Cf. Coleman, *supra* note 25, at 66-75 (finding a disparity between comments to regulators emphasizing costs of a regulatory standard and comments to investors reassuring them that the firm faces minimal regulatory risk).
- 133  TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976). While this interpretation arose in the context of proxy disclosures, see  *id.* at 441-43, the Court subsequently clarified that it applies broadly, including in private securities litigation, see  Basic Inc. v. Levinson, 485 U.S. 224, 231-32 (1988) (“We now expressly adopt the *TSC Industries* standard of materiality for the § 10b and Rule 10b-5 context.”). See also  Matrixx Initiatives, Inc. v. Siracusano, 563 U.S. 27, 38 (2011) (applying the *TSC Industries* standard as adopted in *Basic*).
- 134 See 17 C.F.R. § 230.408(a) (2018) (governing prospectuses); *id.* § 240.12b-20 (reports); *id.* § 240.14a-9(a) (proxy statements).
- 135 Cf. Williams, *supra* note 25 (arguing for a broader interpretation of materiality in the context of social and environmental disclosures).
- 136 See 17 C.F.R. §§ 230.405, 240.12b-2.
- 137 See Williams, *supra* note 25, at 1264-65.
- 138 See SEC 2010 Climate Guidance, *supra* note 118, at 6291.
- 139 See Gunnar Friede et al., *ESG and Financial Performance: Aggregated Evidence from More than 2000 Empirical Studies*, 5 J. SUSTAINABLE FIN. & INV. 210, 225-26 (2015); see also *id.* at 226 (“[W]e clearly find evidence for the business case for ESG investing.”). Yet a positive correlation between ESG performance and financial performance does not necessarily mean that either measure of performance would meet the materiality standard for risk disclosures under Regulation S-K.

- 140 See, e.g., Harper Ho, *supra* note 25, at 416-20 (citing empirical studies indicating that investors increasingly care about nonfinancial information, including ESG performance).
- 141 See *id.* at 420-21 (summarizing surveys of investors regarding the importance of nonfinancial ESG information).
- 142 Business and Financial Disclosure Required by Regulation S-K, 81 Fed. Reg. 23,916, 23,916 (Apr. 22, 2016); see *id.* at 23,969-70.
- 143 See SUSTAINABILITY ACCOUNTING STANDARDS BD., THE STATE OF DISCLOSURE 2016: AN ANALYSIS OF THE EFFECTIVENESS OF SUSTAINABILITY DISCLOSURE IN SEC FILINGS 4 (2016).
- 144 Larry Fink, *A Sense of Purpose: Annual Letter to CEOs*, BLACKROCK, <https://perma.cc/YUE5-BNzc> (archived Oct. 20, 2018); see Andrew Ross Sorkin, *BlackRock's Message: Contribute to Society, or Risk Losing Our Support*, N.Y. TIMES: DEALBOOK (Jan. 15, 2018), <https://perma.cc/HVD9-2ZZY>.
- 145  15 U.S.C. § 77g(a)(1) (2017); see, e.g., *id.* § 77j(c) (“Any prospectus shall contain such other information as the Commission may by rules or regulations require as being necessary or appropriate in the public interest or for the protection of investors.”); see also Harper Ho, *supra* note 25, at 440; Williams, *supra* note 25, at 1203-04.
- 146 See Williams, *supra* note 25, at 1265-66, 1265 nn.358-62; see also Executive Compensation Disclosure, Securities Act Release No. 8765, Exchange Act Release No. 55,009, 71 Fed. Reg. 78,338 (Dec. 29, 2006) (codified as amended at 17 C.F.R. § 229.402 (2018)) (mandating disclosure of executive compensation); Shareholder Communications, Shareholder Participation in the Corporate Electoral Process and Corporate Governance Generally, Exchange Act Release No. 15,384, Investment Company Act Release No. 10,510, 43 Fed. Reg. 58,522 (Dec. 14, 1978) (codified as amended at 17 C.F.R. § 240.14a-8) (mandating disclosure of board committee structure and of board members' attendance at meetings); Views on Disclosure of Illegal Campaign Contributions, Securities Act Release No. 5466, Exchange Act Release No. 10,673, Investment Company Act Release No. 8265, 39 Fed. Reg. 10,237 (Mar. 19, 1974) (mandating disclosure of illegal campaign contributions).
- 147 See sources cited *supra* note 40 (tracking environmental deregulatory actions); cf. Act of Feb. 14, 2017, Pub. L. No. 115-4, 131 Stat. 9 (nullifying an SEC rule that required the disclosure of payments to foreign governments by firms in resource extraction industries). For the SEC rule nullified by Congress, see Disclosure of Payments by Resource Extraction Issuers, 81 Fed. Reg. 49,360 (July 27, 2016).
- 148 See *infra* Part IV.A.
- 149 See Adler, *supra* note 24, at 23-24 (noting this tension); Scott, *supra* note 24, at 142 (same); *infra* Part III.B; cf. Richman, *supra* note 24, at 386 (noting, outside the environmental context, that antitrust law may conflict with beneficial forms of private collective standard setting).
- 150 See *infra* Part III.B.
- 151 See HERBERT HOVENKAMP, PRINCIPLES OF ANTITRUST 34 (2017) (citing Robert H. Bork, *Legislative Intent and the Policy of the Sherman Act*, 9 J.L. & ECON. 7 (1966)).
- 152 See *id.* (citing Louis B. Schwartz, “Justice” and Other Non-Economic Goals of Antitrust, 127 U. PA. L. REV. 1076 (1979) (commenting on Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1051 (1979))).

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

- 153 See *id.* at 35 (citing Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 HASTINGS L.J. 65 (1982)).
- 154 See *id.* at 36; see also Herbert Hovenkamp, *Antitrust's Protected Classes*, 88 MICH. L. REV. 1, 24-27 (1989) (reviewing the Sherman Act's legislative history and concluding that “competitors, at least as much as consumers, are to be considered among antitrust's protected classes”).
- 155 Ch. 647, 26 Stat. 209 (1890) (codified as amended at  15 U.S.C. § § 1-7 (2017)).
- 156 Pub. L. No. 63-212, 38 Stat. 730 (1914) (codified as amended in scattered sections of 15 and 29 U.S.C.).
- 157 Pub. L. No. 63-203, 38 Stat. 717 (1914) (codified as amended at  15 U.S.C. §§ 41-58).
- 158 See HOVENKAMP, *supra* note 151, at 42.
- 159  15 U.S.C. § 1.
- 160 See  NCAA v. Bd. of Regents of the Univ. of Okla., 468 U.S. 85, 100 (1984).
- 161 See *id.* (“Horizontal price fixing and output limitation are ordinarily condemned as a matter of law”);  Klor's, Inc. v. Broadway-Hale Stores, Inc., 359 U.S. 207, 211-12 (1959) (“Group boycotts, or concerted refusals by traders to deal with other traders, have long been held to be in the forbidden category.”).
- 162  Nw. Wholesale Stationers, Inc. v. Pac. Stationery & Printing Co., 472 U.S. 284, 294 (1985) (quoting LAWRENCE ANTHONY SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST 261-62 (1977)).
- 163 See   N. Pac. Ry. Co. v. United States, 356 U.S. 1, 5 (1958).
- 164 See Scott H. Dewey, “*The Antitrust Case of the Century*”: *Kenneth F. Hahn and the Fight Against Smog*, 81 S. CAL. Q. 341, 342-45 (1999).
- 165 *Id.* at 345.
- 166 See *id.* at 347-48.
- 167 See *id.* at 342 n.4, 348.
- 168 See *United States v. Auto. Mfrs. Ass'n*, 307 F. Supp. 617 (C.D. Cal. 1969), *appeal dismissed for want of juris. per curiam sub nom. City of New York v. United States*, 397 U.S. 248 (1970).
- 169 See Dewey, *supra* note 164, at 348 & n.12.
- 170 Ch. 23, 1960 Cal. Stat. 346 (codified as amended in scattered sections of the California Health and Safety and Vehicle Codes); see Dewey, *supra* note 164, at 350.
- 171 See Dewey, *supra* note 164, at 350-51; see also California Motor Vehicle Pollution Control Act  sec. 1, § 24389(a), 1960 Cal. Stat. at 348.
- 172 See Dewey, *supra* note 164, at 351.
- 173 See *id.*

- 174 *See id.* at 351-52.
- 175 *See id.* at 352-53.
- 176 *See id.* at 353.
- 177 United States v. Auto. Mfrs. Ass'n, 307 F. Supp. 617, 618 (C.D. Cal. 1969), *appeal dismissed for want of juris. per curiam sub nom.* City of New York v. United States, 397 U.S. 248 (1970); *see also* JAMES E. KRIER & EDMUND URSIN, POLLUTION AND POLICY: A CASE ESSAY ON CALIFORNIA AND FEDERAL EXPERIENCE WITH MOTOR VEHICLE AIR POLLUTION, 1940-1975, at 88 (1977); Dewey, *supra* note 164, at 353-54; Howard P. Willens, *The Regulation of Motor Vehicle Emissions*, 3 NAT. RESOURCES LAW. 120, 126 (1970).
- 178 *See* Willens, *supra* note 177, at 126.
- 179 *See* Auto. Mfrs. Ass'n, 307 F. Supp. at 618 (identifying the law firm Wilmer, Cutler & Pickering as counsel for the AMA); Willens, *supra* note 177, at 120 n.* (identifying the author as a partner in the firm).
- 180 Willens, *supra* note 177, at 127.
- 181 *Id.* (emphasis omitted).
- 182 Dewey, *supra* note 164, at 356-57.
- 183 *See id.* at 357; *see also* Auto. Mfrs. Ass'n, 307 F. Supp. at 618 (noting that the government was seeking only “an order enjoining the [] defendants from continuing the alleged unlawful conduct”).
- 184 *See* Commission Decision of Apr. 13, 2011, Case COMP/39579--Consumer Detergents, C(2011)2528 final, at 5, 23 [hereinafter *Consumer Detergents*]; *see also* Scott, *supra* note 24, at 131-32. A third firm, Henkel, participated in the challenged conduct but was granted immunity from the fines for having reported the agreement and cooperated with the Commission's investigation. *See Consumer Detergents, supra*, at 21.
- 185 *See Consumer Detergents, supra* note 184, at 8; *see also* Scott, *supra* note 24, at 132.
- 186 *See Consumer Detergents, supra* note 184, at 8-9.
- 187 *See id.* at 9; *see also infra* Part III.B.
- 188 *Consumer Detergents, supra* note 184, at 9.
- 189 *Id.*
- 190 *Id.* at 9-10.
- 191 Although enforcement of antitrust law by private parties dwarfs enforcement by the federal government, *see* HOVENKAMP, *supra* note 151, at 532 (reporting that 95% of antitrust suits are privately initiated); Daniel A. Crane, *Optimizing Private Antitrust Enforcement*, 63 VAND. L. REV. 675, 675-76 (2010) (citing a 10:1 ratio), courts have held that antitrust law is not a tool for environmental governance that can be used by any injured party. Despite broadly worded language in the Clayton Act authorizing suits by “any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws,” 15 U.S.C. § 15(a) (2017), courts have limited the class of plaintiffs who can invoke antitrust law to those who have suffered an “antitrust injury,” *see, e.g.*, Atl. Richfield Co. v. USA Petroleum Co., 495 U.S. 328, 334 (1990) (emphasis omitted) (quoting Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 489 (1977)).

Indeed, after the federal government's suit against the automakers, courts rejected efforts by states, local governments, and private parties to seek more extensive relief such as retrofits or restitution for those who had retrofitted their own vehicles. *See* *Washington v. Auto. Mfrs. Ass'n (In re Multidistrict Vehicle Air Pollution)*, 538 F.2d 231, 234-36 (9th Cir. 1976) (holding that the provision of the Clayton Act requiring courts to approve consent decrees only if they are in the public interest is “not a broad license to the court to issue decrees designed to eliminate air pollution”); *In re Multidistrict Private Civil Treble Damage Antitrust Litig. Involving Motor Vehicle Air Pollution Control Equip.*, 52 F.R.D. 398, 402, 404-05 (C.D. Cal. 1970), *aff'd in part, rev'd and remanded in part sub nom.* *California v. Auto. Mfrs. Ass'n (In re Multidistrict Vehicle Air Pollution M.D.L. No. 31)*, 481 F.2d 122 (9th Cir. 1973).

192 *See* sources cited *supra* note 24.

193 *See, e.g.*, *NCAA v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85, 100-01 (1984) (acknowledging that “[h]orizontal price fixing and output limitation are ordinarily condemned as a matter of law under an ‘illegal *per se*’ approach” and that the case involved “horizontal restraints on competition,” but “[n]evertheless ... decid[ing] that it would be inappropriate to apply a *per se* rule to this case”); *see also* HOVENKAMP, *supra* note 151, at 232-35 (discussing the “exaggerated distinction between” the two doctrines (capitalization altered)).

194 *See supra* notes 160-63 and accompanying text.

195 *See* *Radiant Burners, Inc. v. Peoples Gas Light & Coke Co.*, 364 U.S. 656 (1961) (per curiam) (holding that the plaintiff, who had alleged that an industry association's failure to approve its heater resulted not from the application of an objective set of testing standards but from a desire to restrict competition, had stated a claim under the Sherman Act).

196 *FTC v. Ind. Fed'n of Dentists*, 476 U.S. 447, 457-58 (1986) (quoting *Chi. Bd. of Trade v. United States*, 246 U.S. 231, 238 (1918)).

197 HOVENKAMP, *supra* note 151, at 233; *see also* *NCAA*, 468 U.S. at 103 (stating that the key criterion under both the *per se* rule and the rule of reason is the “impact on competitive conditions” (quoting *Nat'l Soc'y of Prof'l Eng'rs v. United States*, 435 U.S. 679, 690 (1978))).




198 *See* *Ind. Fed'n of Dentists*, 476 U.S. at 459-60 (noting that an agreement that “limit[s] consumer choice by impeding the ‘ordinary give and take of the market place’ cannot be sustained under the Rule of Reason” (citation omitted) (quoting *Nat'l Soc'y of Prof'l Eng'rs*, 435 U.S. at 692)).

199 *See* Scott, *supra* note 24, at 123 (arguing that even though the rule of reason provides “increased flexibility,” it is still “unlikely to encourage” environmental or social agreements among private firms).

200 For detailed examples of private environmental governance approaches, see sources cited in note 5 above.

201 *See The Higg Index*, SUSTAINABLE APPAREL COALITION, <https://perma.cc/PS2C-TSY8> (archived Oct. 20, 2018) (“[T]he Higg Index is a suite of tools that enables brands, retailers, and facilities of all sizes—at every stage in their sustainability journey—to accurately measure and score a company or product's sustainability performance.”).

202 *See Responsible Care*, AM. CHEMISTRY COUNCIL, <https://perma.cc/DV5L-QK3B> (archived Oct. 20, 2018) (“Responsible Care has helped ... member companies significantly enhance their performance and improve the health and safety of their employees, the communities in which they operate and the environment as a whole.”).

- 203 Cf.  *Consol. Metal Prods., Inc. v. Am. Petroleum Inst.*, 846 F.2d 284, 286, 293-97 (5th Cir. 1988) (rejecting a challenge to a private standard-setting organization's failure to approve the plaintiff's product, where there was no evidence that competing manufacturers sought to reduce competition or of any anticompetitive effect).
- 204 See  *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 500-01 (1988).
- 205  *Id.* at 501; see also FTC & U.S. Dep't of Justice, *Antitrust Guidelines for Collaborations Among Competitors* 5-6 (2000), <https://perma.cc/B9KS-LUVJ> (noting that many collaborations among competitors can be procompetitive).
- 206 See *supra* notes 160-61 and accompanying text (describing the contexts in which courts apply the per se rule).
- 207 See Scott, *supra* note 24, at 126-28 (arguing that even scrutiny under the rule of reason can deter socially responsible collaboration).
- 208 The Diamond Dealers Club is a voluntary association of diamond merchants with approximately 1,800 members, most of whom operate as middlemen between diamond retailers and diamond miners and producers. See Richman, *supra* note 24, at 331-32.
- 209 See *id.* at 335-39.
- 210 See King & Lenox, *Self-Regulation*, *supra* note 26, at 713 (“[O]ur findings highlight the difficulty of creating self-regulation without explicit sanctions.”); see also *id.* at 699; *Responsible Care*, *supra* note 202.
- 211 See King & Lenox, *Self-Regulation*, *supra* note 26, at 712-14; see also Michael J. Lenox & Jennifer Nash, *Industry Self-Regulation and Adverse Selection: A Comparison Across Four Trade Association Programs*, 12 BUS. STRATEGY & ENV'T 343, 344, 347 (2003) (reviewing self-regulatory programs in four different industries and hypothesizing that “only when self-regulatory programs have explicit sanctions for malfeasance,” such as expulsion, “may they avoid attracting more polluting firms”). King and Lenox noted that while the program permitted the expulsion of noncompliant members, the industry association was reluctant to employ this sanction. See King & Lenox, *Self-Regulation*, *supra* note 26, at 700. A recent study found that plants owned by parent firms participating in Responsible Care increased their pollution by 15.9% relative to similar plants owned by nonparticipants. See Shanti Gamper-Rabindran & Stephen R. Finger, *Does Industry Self-Regulation Reduce Pollution?: Responsible Care in the Chemical Industry*, 43 J. REG. ECON. 1, 3 (2013). In contrast, the same authors found that participation in the Responsible Care program significantly reduced the likelihood of industrial accidents. See Stephen R. Finger & Shanti Gamper-Rabindran, *Testing the Effects of Self-Regulation on Industrial Accidents*, 43 J. REG. ECON. 115, 122, 133 (2013).
- 212 See King & Lenox, *Self-Regulation*, *supra* note 26, at 713.
- 213 See *infra* Part IV.A.
- 214 See Adler, *supra* note 24, at 49 (noting that this conflict exists whenever private actors cooperate to preserve common pool resources).
- 215 See *id.* at 5-8; see also Hardin, *supra* note 35, at 1244-45 (identifying the tragedy of the commons in grazing and the destruction of other environmental public goods).
- 216 See Adler, *supra* note 24, at 4 (citing *Manaka v. Monterey Sardine Indus., Inc.*, 41 F. Supp. 531, 532 (N.D. Cal. 1941)).


- 217 *See id.* (citing *Manaka*, 41 F. Supp. at 536).
- 218 *See id.* at 4-5.
- 219 *Id.*
- 220 *Id.* at 24. In *Chicago Board of Trade v. United States*, for instance, the Supreme Court found that many of the effects of the limitation at issue “helped to improve market conditions” and upheld the Board of Trade’s restraints. *See* 246 U.S. 231, 240-41 (1918).
- 221 *See* Adler, *supra* note 24, at 26-35 (discussing several fishery cases in which courts found antitrust violations despite positive environmental impacts).
- 222 *See id.* at 24; *see also id.* at 60-77 (discussing judicial and legislative remedies to the conflict).
- 223 *See infra* Part IV.A.
- 224 A basic premise of corporate law is that “a corporation should have as its objective the conduct of business activities with a view to enhancing corporate profit and shareholder gain.” 1 PRINCIPLES OF CORP. GOVERNANCE: ANALYSIS & RECOMMENDATIONS § 2.01(a) (AM. LAW INST. 1994) (citation omitted). But this objective is subject to the limitations that the corporation must comply with the law, *id.* § 2.01(b)(1); “[m]ay take into account ethical considerations that are reasonably regarded as appropriate to the responsible conduct of business,” *id.* § 2.01(b)(2); and “[m]ay devote a reasonable amount of resources to public welfare, humanitarian, educational, and philanthropic purposes,” *id.* § 2.01(b)(3). *See also* sources cited *supra* notes 22, 26.
- 225 *Cf.* Lawrence Lessig, Commentary, *The Law of the Horse: What Cyberlaw Might Teach*, 113 HARV. L. REV. 501, 506 (1999) (describing cyberspace as having “no nature” but instead a “particular architecture that cannot be changed,” an architecture that is “a function of its design--or ... its code”).
- 226 *Cf.* Jamie Dimon & Warren E. Buffett, Opinion, *Short-Termism Is Harming the Economy*, WALL ST. J. (June 6, 2018, 10:00 PM ET), <https://perma.cc/3VE2-MR4L> (proposing a move away from quarterly earnings reports which “often lead[] to an unhealthy focus on short-term profits at the expense of long-term strategy, growth and sustainability”).
- 227 *See* Lazarus, *supra* note 3, at 746-47 (arguing that environmental law is unique in the sense that the harms it seeks to prevent exist on distant time horizons).
- 228 *See* Friedman, *supra* note 10, at 33; *see also* Bernard Black & Reinier Kraakman, *A Self-Enforcing Model of Corporate Law*, 109 HARV. L. REV. 1911, 1921 (1996) (“The efficiency goal of maximizing the company’s value to investors remains, in our view, the principal function of corporate law.”); Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 307 (1976).
- 229 *See* Friedman, *supra* note 10, at 33, 122.
- 230 *See* Blair & Stout, *supra* note 22, at 299-305 (discussing how the business judgment rule is consistent with a long-term approach to value); Einer Elhauge, *Sacrificing Corporate Profits in the Public Interest*, 80 N.Y.U. L. REV. 733, 782 (2005) (“[E]ven if shareholder profit-maximization were our only goal, fulfilling it would inevitably create considerable management discretion to sacrifice profits in the public interest.”); Sneirson, *supra* note 22, at 1004-05, 1004 n.90 (arguing that the principle that corporations should conduct business to “enhanc[e] corporate profit and shareholder gain” draws a distinction between “[e]nhancing” and “maximizing” and refers to enhancement in the long term (emphasis omitted) (quoting 1 PRINCIPLES OF CORP. GOVERNANCE: ANALYSIS & RECOMMENDATIONS § 2.01(a) (AM. LAW INST. 1994)); *cf.* Oliver Hart & Luigi Zingales, *Companies Should Maximize Shareholder Welfare Not Market Value*, 2


THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137



J.L. FIN. & ACCT. 247, 249 (2017) (arguing that while Friedman's separation thesis is correct when a firm's externality is "separable from money-making," as in the case of charitable giving, his thesis is wrong when it comes to "non-separable activities, where profit and damage are inextricably connected"). See generally Eric W. Orts, *Beyond Shareholders: Interpreting Corporate Constituency Statutes*, 61 GEO. WASH. L. REV. 14, 32-35 (1992) (examining state statutes expanding the discretion of firm managers to consider the interests of constituencies other than shareholders, largely in the corporate takeover context).


231 See John C. Coffee, Jr., *The Mandatory/Enabling Balance in Corporate Law: An Essay on the Judicial Role*, 89 COLUM. L. REV. 1618, 1618-19 (1989) (distinguishing between those who view corporate law as comprising "mandatory rules that the shareholders themselves cannot waive or modify" from those "contractarians" who "see corporate law as primarily composed of waivable 'default rules'").



232 See *About the Division of Corporations*, DEL. DIVISION CORPS., <https://perma.cc/Q2NH-85PR> (archived Oct. 20, 2018).

233 See  *eBay Domestic Holdings v. Newmark*, 16 A.3d 1, 26 (Del. Ch. 2010) (noting the fiduciary duty of directors to shareholders); see also 1 PRINCIPLES OF CORP. GOVERNANCE: ANALYSIS & RECOMMENDATIONS § 2.01 (offering the more moderate statement that directors should "enhanc[e] corporate profit and shareholder gain," subject to legal and ethical limitations, and that the firm "[m]ay devote a reasonable amount of resources to public welfare, humanitarian, educational, and philanthropic purposes" without running afoul of its duties to shareholders).

234  *eBay*, 16 A.3d at 33.


235  *Id.* at 36 (quoting *Unitrin, Inc. v. Am. Gen. Corp. (In re Unitrin, Inc. S'holders Litig.)*,  651 A.2d 1361, 1373 (Del. 1995)).


236 *Id.* (alteration in original) (quoting  *Unitrin*, 651 A.2d at 1373).

237 *Id.* (alteration in original) (quoting   *Cede & Co. v. Technicolor, Inc.*, 634 A.2d 345, 360 (Del. 1993), *modified in other part*, 636 A.2d 956 (Del. 1994)).

238 Cf. Wallace, *supra* note 22, at 765 (concluding that the business judgment rule allows leeway for directors to "pretty much take (or not take) whatever action they choose regarding corporate policy and practice on climate change" without judicial second-guessing).

There is an exception to the rule when a firm faces an attempted takeover. At such a time, the Delaware courts do not apply the business judgment rule to evaluate defensive actions adopted by a target's board

of directors, but instead apply a heightened standard of scrutiny. See  *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946, 954 (Del. 1985) (noting that when a board addresses a pending takeover bid, in light of the "omnipresent specter" that the board may seek to entrench its own interests, "there is an enhanced duty which calls for judicial examination at the threshold before the protections of the business judgment

rule may be conferred"); see also  *Revlon, Inc. v. MacAndrews & Forbes Holdings*, 506 A.2d 173, 182, 185 (Del. 1986) (holding that where the board allowed "considerations other than the maximization of shareholder profit to affect their judgment" in the context of an auction among bidders to take over the firm, the board's action was not entitled to deference); Orts, *supra* note 230, at 45-47.

Beginning with Pennsylvania in 1983, more than thirty states, though not Delaware, have adopted constituency statutes that permit consideration of broader stakeholder interests. See generally Christopher Geczy et al., *Institutional Investing When Shareholders Are Not Supreme*, 5 HARV. BUS. L. REV. 73, app. A at 130-31 (2015) (listing thirty-three state statutes). While the origin of constituency statutes lies in the wave of mergers and takeovers that occurred in the early 1980s, see Orts, *supra* note 230, at 23-26, their adoption continued into the 1990s after *Unocal*. They offer a counterweight to the common law approach

of addressing directors' duties. *See id.* at 88-89. While some of these statutes are expressly limited to the context of takeovers or changes in control, others are written in broader terms. *See Orts, supra* note 230, at 30-31, 31 n.73 (noting this distinction and citing statutes from states with narrower provisions); *see also* Geczy et al., *supra*, at 97 & n.139 (listing nine states with constituency statutes limited to the takeover context).

These constituency statutes strengthen the safe harbor protection for firm managers who take stakeholder interests into account in the ordinary course of business (when such discretion would also arguably be protected under the business judgment rule). But their most significant impact is in extending this discretion to the takeover context. *See Geczy et al., supra*, at 98 (“[D]irectors retain their flexibility ... to consider nonshareholder interests in takeover situations under constituency statutes.”). Thus, constituency statutes operate as a safe harbor in the takeover context as well.


239 *See Shlensky ex rel. Chi. Nat'l League Ball Club (Inc.) v. Wrigley*, 237 N.E.2d 776, 778, 780 (Ill. App. Ct. 1968).

240 *Id.* at 777.

241 *Id.*

242 *See id.*

243 *Id.* at 778.

244 *See id.* at 779-80; *see also id.* (“The judges are not business experts.” (emphasis omitted) (quoting  *Dodge v. Ford Motor Co.*, 170 N.W. 668, 684 (Mich. 1919))). Other language in *Dodge v. Ford* is often cited in support of the profit maximization view. *See Blair & Stout, supra* note 22, at 301 (“*Dodge v. Ford Motor Co.* is one of the most frequently cited cases in support of the shareholder primacy view.” (footnote omitted)). *But see id.* at 301-02 (arguing that this interpretation of *Dodge v. Ford* should be limited to the duties among shareholders in closely held corporations).

245 *See Shlensky*, 237 N.E.2d at 780.

246 *See* Stephen M. Bainbridge, *The Business Judgment Rule as Abstention Doctrine*, 57 VAND. L. REV. 83, 88-89 (2004); Elhauge, *supra* note 230, at 739 (“The very reason for the business judgment rule is precisely that courts cannot reliably figure out what maximizes profits”).

247 *See infra* Part IV.A.

248 *See* Dana Brakman Reiser, *Benefit Corporations--A Sustainable Form of Organization?*, 46 WAKE FOREST L. REV. 591, 592-95 (2011) (discussing the rise of benefit corporations). Well-known benefit corporations include Patagonia, Method Products, and Plum Organics. *See* PATAGONIA WORKS, ANNUAL BENEFIT CORPORATION REPORT: FISCAL YEAR 2017, at 1 (2018), <https://perma.cc/9W5E-BBYD>; *Our Story*, METHOD, <https://perma.cc/Q829-MGH7> (archived Oct. 20, 2018); Ariel Schwartz, *Inside Plum Organics, The First Benefit Corporation Owned by a Public Company*, FAST COMPANY (Jan. 22, 2014), <https://perma.cc/48P2-QK9Z>.

Firms may also choose to be privately certified by the nonprofit organization B Lab as a “B Corporation,” which is a private governance model rather than one of public law. *See* Brakman Reiser, *supra*, at 594 (describing the B Corp certification process); *About B Corps*, CERTIFIED B CORP., <https://perma.cc/795P-7XA5> (archived Oct. 20, 2018).



For an argument that the rise of benefit corporation statutes may negatively affect interpretations of ordinary corporate law with respect to the pursuit of social goals, see Kevin V. Tu, *Socially Conscious Corporations and Shareholder Profit*, 84 GEO. WASH. L. REV. 121 (2016). For more on enterprises with both a profitmaking and social purpose, see generally Michael D. Gottesman, Comment, *From Cobblestones to*

Pavement: The Legal Road Forward for the Creation of Hybrid Social Organizations, 26 YALE L. & POL'Y REV. 345 (2007).

- 249 See *infra* text accompanying notes 258-59.
- 250 See Act of Apr. 13, 2010, chs. 97-98, 2010 Md. Laws 980 (codified as amended at MD. CODE ANN., CORPS. & ASS'NS §§ 5-6C-01 to -08 (LexisNexis 2018)).
- 251 See *State by State Status of Legislation*, BENEFIT CORP., <https://perma.cc/L73H-4W4Y> (archived Oct. 20, 2018) (reporting as well that six additional states have benefit corporation legislation in the works). While other forms of hybrid social enterprise exist, see Brakman Reiser, *supra* note 248, at 591-92, this Article focuses on benefit corporations as a common statutory form. On hybrid forms of social enterprise more generally, including outside the United States, see ORTS, *supra* note 22, at 206-15.
- 252 See MODEL BENEFIT CORP. LEGISLATION (B LAB 2017), <https://perma.cc/9YT6-7WGU>; see also J. Haskell Murray, *The Social Enterprise Law Market*, 75 MD. L. REV. 541, 553-54 (2016) (discussing the degree to which different states have followed the Model Legislation or varied in their approaches). The discussion that follows highlights common areas and areas of variation. Delaware, however, which adopted its statute creating the “public benefit corporation” entity in 2013, diverges from the Model Legislation in several respects, also highlighted below. See Act of July 17, 2013, ch. 122, § 8, 79 Del. Laws (codified as amended at DEL. CODE ANN. tit. 8, §§ 361-368 (2018)). Some states, including Colorado and Minnesota, have adopted statutes that borrow from both the Model Legislation and Delaware's approach. See COLO. REV. STAT. §§ 7-101-501 to -509 (2018); MINN. STAT. §§ 304A.001-301 (2018); see also Murray, *supra*, at 554.
- 253 See Brakman Reiser, *supra* note 248, at 596. If an existing corporation seeks to become a benefit corporation, the statutes generally require supermajority support among shareholders. See, e.g., DEL. CODE ANN. tit. 8, § 363(a) (requiring a supermajority vote to elect public benefit corporation status, or to merge or consolidate in a way that would result in such status); MD. CODE ANN., CORPS. & ASS'NS §§ 2-604(e), 5-6C-03(b) (requiring a supermajority); VT. STAT. ANN. tit. 11A, § 21.05 (2018) (same); VA. CODE ANN. §§ 13.1-707(D), .1-785 (2018) (same); see also MODEL BENEFIT CORP. LEGISLATION §§ 102, 104(a), 105(a) (providing that election or termination of benefit corporation status requires supermajority support among shareholders); Brakman Reiser, *supra* note 248, at 612.
- 254 See MD. CODE ANN., CORPS. & ASS'NS § 1-502(a)(2) (requiring the name of a benefit corporation to indicate its benefit status); *id.* § 5-6C-05 (requiring a “[c]lear reference” to benefit status to “appear prominently” on charter documents and stock certificates); VT. STAT. ANN. tit. 11A, §§ 21.03(a)(1), .04 (requiring a statement in articles of incorporation); see also MODEL BENEFIT CORP. LEGISLATION §§ 103, 104(a) (same); Brakman Reiser, *supra* note 248, at 596. In contrast, Delaware requires designation as a public benefit corporation within the certificate of incorporation, and permits but does not require the name of the corporation to contain the words “public benefit corporation” or the abbreviation “PBC.” See tit. 8, § 362(a)(2), (c). If the name does not contain either, the corporation must provide notice prior to issuance of stock that the shares are in a public benefit corporation. See *id.* § 362(c).
- 255 See Brakman Reiser, *supra* note 248, at 597-98 (quoting MD. CODE ANN., CORPS. & ASS'NS §§ 5-6C-01(c), -06(a); and S. 298, 2011 Leg., 26th Sess. §§ 2, 5 (Haw. 2011)) (noting similar language in different state statutes). The Model Legislation defines “[g]eneral public benefit” using this language, qualifying that the impact on society and the environment should be “taken as a whole” and “assessed against a third-party standard.” MODEL BENEFIT CORP. LEGISLATION § 102; see also, e.g., VT. STAT. ANN. tit. 11A, §§ 21.03(a)(4), .08(a) (using similar language to define “[g]eneral public benefit” and similarly requiring impact to be assessed against a “third-party standard”). In contrast, Delaware does not require public benefit corporations to pursue a general public benefit. Rather, in its certificate of incorporation, a public benefit corporation must “[i]dentify ... 1 or more *specific* public benefits to be promoted.” See tit. 8, § 362(a)(1) (emphasis added); see also *id.* § 102(a)

(3). Delaware law defines “[p]ublic benefit” as “a positive effect (or reduction of negative effects) on 1 or more categories of persons, entities, communities or interests (other than stockholders in their capacities as stockholders) including, but not limited to, effects of an artistic, charitable, cultural, economic, educational, environmental, literary, medical, religious, scientific or technological nature.” *Id.* § 362(b).

256 See Brakman Reiser, *supra* note 248, at 597-98. The Model Legislation defines “[s]pecific public benefit” to include a number of environmental options, including “protecting or restoring the environment,” “improving human health,” and “conferring any other particular benefit on society or the environment.” MODEL BENEFIT CORP. LEGISLATION § 102; *see also, e.g.*, MD. CODE ANN., CORPS. & ASS’NS §§ 5-6C-01(d), -06(b) (permitting the corporation to identify a specific public benefit and using similar language to define the concept); VT. STAT. ANN. tit. 11A, §§ 21.03(a)(6), .08 (same).

257 MODEL BENEFIT CORP. LEGISLATION § 301(a)(1); *see also, e.g.*, MD. CODE ANN., CORPS. & ASS’NS § 5-6C-07(a)(1); VT. STAT. ANN. tit. 11A, § 21.09(a)(1). In a comment to the Model Legislation, the drafters expressly “reject[ed]” the notion that “directors must maximize the financial value of a corporation.” *See* MODEL BENEFIT CORP. LEGISLATION § 301 cmt. (citing  Dodge v. Ford Motor Co., 170 N.W. 668 (Mich. 1919); and  eBay Domestic Holdings v. Newmark, 16 A.3d 1 (Del. Ch. 2010)). They distinguished state constituency statutes, *see generally* Orts, *supra* note 230, at 26-48 (discussing state constituency statutes and the interests they permit directors to consider), noting that the Model Legislation “makes it mandatory for the directors of a benefit corporation to consider the interests and factors that they would otherwise simply be permitted to consider in their discretion under the typical constituency statute.” MODEL BENEFIT CORP. LEGISLATION § 301 cmt.; *see also, e.g.*, MD. CODE ANN., CORPS. & ASS’NS § 5-6C-07(a), (c) (requiring directors to consider the impact on multiple stakeholders and immunizing from liability directors who do so); VT. STAT. ANN. tit. 11A, § 21.09(a)-(b) (similar). Despite the mandatory language, it is not yet clear precisely how enforceable this requirement is. Directors also “need not give priority to a particular interest or factor” unless the firm has expressly made such a commitment in its articles of incorporation. *See* MODEL BENEFIT CORP. LEGISLATION § 301(a)(3); *see also, e.g.*, VT. STAT. ANN. tit. 11A, § 21.09(a)(3).

258 *See* MODEL BENEFIT CORP. LEGISLATION § 201(c); Brakman Reiser, *supra* note 248, at 598; *see also, e.g.*, MD. CODE ANN., CORPS. & ASS’NS § 5-6C-06(c); VT. STAT. ANN. tit. 11A, § 21.08(c).

259 *See* MODEL BENEFIT CORP. LEGISLATION § 301(c)(1); Brakman Reiser, *supra* note 248, at 598-99; *see also, e.g.*, MD. CODE ANN., CORPS. & ASS’NS § 5-6C-07(c); VT. STAT. ANN. tit. 11A, § 21.09(d).






260 *Cf.* Light & Orts, *supra* note 5, at 69-70 (discussing accountability in private environmental governance).

261 *See* MODEL BENEFIT CORP. LEGISLATION §§ 401-402; Brakman Reiser, *supra* note 248, at 603-04; *see also, e.g.*, MD. CODE ANN., CORPS. & ASS’NS § 5-6C-08; VT. STAT. ANN. tit. 11A, § 21.14. *But see* DEL. CODE ANN. tit. 8, § 366(b), (c)(2) (2018) (requiring biennial reports to stockholders as to the promotion of the specific public benefit, and permitting, but not requiring, publication).

262 MODEL BENEFIT CORP. LEGISLATION §§ 102 (capitalization altered); *see id.* § 401(a)(2) (requiring the annual benefit report to include an assessment of the firm’s “environmental and social performance” against this third-party standard); *see also, e.g.*, MD. CODE ANN., CORPS. & ASS’NS § 5-6C-08(a)(2); VT. STAT. ANN. tit. 11A, § 21.14(a)(2). *But see* DEL. CODE ANN. tit. 8, § 366(c)(3) (permitting but not requiring the use of a third-party standard).












263 *See* Brakman Reiser, *supra* note 248, at 600-02; *see also* Certification, CERTIFIED B CORP., <https://perma.cc/9YEQ-QEKU> (archived Oct. 30, 2018). There are currently more than 2,300 privately certified B Corps globally across fifty countries, *see Year in Review: The B Corp Impact in 2017*, B THE CHANGE (Dec. 28, 2017), <https://perma.cc/7JXB-CJMW>, some of which are also incorporated as benefit corporations under state law, *see* ORTS, *supra* note 22, at 211; Brakman Reiser, *supra* note 248, at 594. Additionally,



THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

- a business entity need not even be a corporation to become a certified B Corp. *See* ORTS, *supra* note 22, at 210-11.
- 264 *See* MODEL BENEFIT CORP. LEGISLATION §§ 102, 305(a); *see also, e.g.*, VT. STAT. ANN. tit. 11A, § 21.13. *But see* DEL. CODE ANN. tit. 8, §§ 365(a)-(b) (providing that the decision of a public benefit corporation director satisfies her fiduciary duties as long as the decision is “informed and disinterested and not such that no person of ordinary, sound judgment would approve”).
- 265 *See* MODEL BENEFIT CORP. LEGISLATION § 303(d); *see also, e.g.*, MD. CODE ANN, CORPS. & ASS'NS § 5-6C-07(b) (providing that directors of benefit corporations have no duty to beneficiaries of the firm's public benefit purpose); VT. STAT. ANN. tit. 11A, § 21.09(e) (same).
- 266 *See* MODEL BENEFIT CORP. LEGISLATION § 305(c); *see also, e.g.*, DEL. CODE ANN. tit. 8, § 367 (providing that shareholders owning more than a threshold amount of shares may bring a derivative lawsuit to enforce the directors' duties under the statute); VT. STAT. ANN. tit. 11A, § 21.13(b) (same).
- 267 *See, e.g.*, Tu, *supra* note 248, at 172-74 (examining the potential negative impact of benefit corporation statutes on interpretations of ordinary corporate law).
- 268 *See* Brakman Reiser, *supra* note 248, at 624-25 (arguing that social enterprise statutes are weak in the absence of effective enforcement mechanisms); *see also* William S. Laufer, *Social Accountability and Corporate Greenwashing*, 43 J. BUS. ETHICS 253, 255-56 (2003) (identifying greenwashing as the phenomenon of firms holding themselves out to the public as meeting environmental standards which they do not, in fact, meet).
- 269 *See infra* Part IV.A.
- 270 Chapter 7 of the Bankruptcy Code governs liquidations, *see* 11 U.S.C. §§ 701-784 (2017), and Chapter 11 governs reorganizations, *see id.* §§ 1101-1174.
- 271 *See generally id.* § 702 (selection of the trustee); *id.* § 704 (duties of the trustee).
- 272 *See generally id.* §§ 1121-1129 (governing reorganization plans); *id.* § 1141(d)(1)(A) (providing that confirmation of a reorganization plan discharges pre-petition debts).
- 273 *See*  Grogan v. Garner, 498 U.S. 279, 286 (1991);  Local Loan Co. v. Hunt, 292 U.S. 234, 244 (1934);  United States v. LTV Corp. (*In re* Chateaugay Corp.), 944 F.2d 997, 1002 (2d Cir. 1991); *cf.*  *In re* CMC Heartland Partners, 966 F.2d 1143, 1146 (7th Cir. 1992) (“A fundamental idea of bankruptcy is that bygones should not prevent the best current deployment of assets.”).
- 274 *See* Mnookin & Kornhauser, *supra* note 70, at 950 (arguing that the “impact of the legal system on negotiations and bargaining that occur outside the courtroom” is significant for “private ordering” (emphasis omitted)).
- 275 Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended at  42 U.S.C. §§ 9601-9675 (2017)).
- 276 *See, e.g.*, Baird & Jackson, *supra* note 23; Lawton & Oswald, *supra* note 23.
- 277 For a forthcoming work exploring these implications, see Joshua Macey & Jackson Salovaara, *Bankruptcy as Bailout: Coal Company Insolvency and the Erosion of Federal Law*, 71 STAN. L. REV. 879 (April, 2019) (on file with author) (arguing that coal bankruptcies are undermining both federal environmental and labor law).


THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

- 278 See *Superfund Cleanup Process*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/CGM7-UC4Y> (last updated Oct. 24, 2018). The National Priorities List is “a list of the worst hazardous waste sites identified by Superfund.” *Id.*
- 279 See 42 U.S.C. § 9607(a) (listing parties that have liability under CERCLA); see also *Finding Potentially Responsible Parties (PRP)*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/D474-QYG5> (last updated Apr. 26, 2018).
- 280 See *id.* § 9606(a) (authorizing the EPA “to secure such relief as may be necessary to abate” any “imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance”).
- 281 See *id.* § 9607(a)(4)(A)-(B).
- 282 See *id.* § 9604(a)(1).
- 283 See generally 11 U.S.C. § 501 (2017) (describing the process for filing proofs of claim).
- 284 See *Midland Cogeneration Venture Ltd. P'ship v. Enron Corp. (In re Enron Corp.)*, 419 F.3d 115, 118, 127-28 (2d Cir. 2005) (noting that the purpose of a “bar date” order for proofs of claim is to “identify with reasonable promptness the identity of those making claims against the bankruptcy estate” (quoting *First Fidelity Bank, N.A. v. Hooker Invs., Inc. (In re Hooker Invs., Inc.)*, 937 F.2d 833, 840 (2d Cir. 1991))).
- 285 For further discussion on the effect of bankruptcy on pre-petition orders for injunctive relief, see notes 302-19 and accompanying text below.
- 286 See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-05-658, ENVIRONMENTAL LIABILITIES: EPA SHOULD DO MORE TO ENSURE THAT LIABLE PARTIES MEET THEIR CLEANUP OBLIGATIONS 1-3 (2005).
- 287 See *id.* at 3-4 (explaining that the EPA does not have the resources to review every bankruptcy petition to determine whether the debtor has environmental liability).
- 288 See *id.* at 5. In contrast, the authors of a separate study concluded that “the strategic use of Chapter 11 to avoid environmental obligations is an uncommon phenomenon.” Lawton & Oswald, *supra* note 23, at 458. This study was limited in scope to Chapter 11 cases that commenced in 2004 and that had closed by mid-2006, see *id.* at 477, so it is not clear that its sample is reflective of the population of bankruptcy cases as a whole.
- 289 This area is ripe for further empirical research.
- 290 See Press Release, U.S. Attorney's Office for the S. Dist. of N.Y., United States Announces \$39.2 Million Settlement with GM to Resolve Environmental Liabilities at the Onondaga Lake Superfund Site in New York (May 1, 2012), <https://perma.cc/R9AM-ZKMX>; see also *Case Summary: 2010 MLC (General Motors) Bankruptcy Settlement*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/E7U5-59KM> (last updated Feb. 7, 2017); *Case Summary: 2012 Settlement Agreements in the MLC (General Motors) Bankruptcy*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/P86B-6ALF> (last updated Feb. 7, 2017).
- 291 See *Case Summary: ASARCO 2009 Bankruptcy Settlement*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/83BP-G3CR> (last updated Jan. 25, 2018).


- 292 See Scott E. Blair, Note, *Toxic Assets: The EPA's Settlement of CERCLA Claims in Bankruptcy*, 86 N.Y.U. L. REV. 1941, 1959-61 (2011); see also *id.* app. A at 1976 (comparing the amounts in the EPA's proofs of claim to the corresponding settlement values and finding that in most cases, the settlement value is less than 3% of the initial claim amount).
- 293 CERCLA provides for strict, joint and several liability for responsible parties unless the environmental harms are capable of apportionment. See  *Burlington N. & Santa Fe Ry. Co. v. United States*, 556 U.S. 599, 613-15 (2009) (“CERCLA defendants seeking to avoid joint and several liability bear the burden of proving that a reasonable basis for apportionment exists.” (citing  *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 810 (S.D. Ohio 1983))).
- 294 See, e.g., *Case Summary: Chemtura Corporation Bankruptcy Settlements*, U.S. ENVTL. PROTECTION AGENCY, <https://perma.cc/Y5SN-KEVT> (last updated Apr. 13, 2017) (characterizing proofs of claim filed by the Department of Justice on behalf of the EPA as “pertain[ing] to past costs incurred and estimated future response costs” at cleanup sites).
- 295 Cf. Mnookin & Kornhauser, *supra* note 70, at 966 (noting that background legal rules affect the willingness of parties in divorce proceedings to engage in settlement negotiations). Such settlements address not only whether environmental obligations are “claims,” but also what priority they should receive, and thus, whether they will be paid in full or compromised on a pro rata basis. See Baird & Jackson, *supra* note 23, at 1208-12.
- 296 See 11 U.S.C. § 1141(d)(1)(A) (2017).
- 297 *Id.* § 101(12).
- 298 *Id.* § 101(5).
- 299 See  *United States v. LTV Corp. (In re Chateaugay Corp.)*, 944 F.2d 997, 1000, 1004-05 (2d Cir. 1991); see also  42 U.S.C. § 9607(a) (2017).
- 300  *In re Chateaugay*, 944 F.2d at 1005; see also  11 U.S.C. § 501(c) (providing for estimation in bankruptcy of “any contingent or unliquidated claim”).
- 301 See  *In re Nat'l Gypsum Co.*, 139 B.R. 397, 407-08 (N.D. Tex. 1992).
- 302 See 42 U.S.C. § 9606(a).
- 303 See  *id.* § 9607(a).
- 304 See  *In re Chateaugay*, 944 F.2d at 1008 (holding that such an order is not a dischargeable claim in bankruptcy).
- 305 See *id.* (“[A] cleanup order that accomplishes the dual objectives of removing accumulated wastes and stopping or ameliorating ongoing pollution emanating from such wastes is not a dischargeable claim.”).
- 306 See  *Torwico Elecs., Inc. v. N.J., Dep't of Env'tl. Prot. (In re Torwico Elecs., Inc.)*, 8 F.3d 146, 151 (3d Cir. 1993) (adopting a similar approach with respect to an order by New Jersey's state environmental agency);  *In re CMC Heartland Partners*, 966 F.2d 1143, 1146 (7th Cir. 1992) (explaining that a reorganized debtor that has emerged from bankruptcy is neither authorized “to operate a nuisance today” nor excused

“from complying with laws of general application”);  *In re Chateaugay*, 944 F.2d at 1008 (“[M]ost environmental injunctions will fall on the non-‘claim’ side of the line.”); *cf.*  *United States v. Apex Oil Co.*, 579 F.3d 734, 735, 738 (7th Cir. 2009) (holding in a RCRA case that an injunctive obligation is a claim only when “the equitable decree cannot be executed,” not when it “merely impos[es] a cost on the defendant, as virtually all equitable decrees do”).


307

See  469 U.S. 274, 276, 282-83 (1985).

308

 *Id.* at 285.

309

 474 U.S. 494 (1986).


310

See 11 U.S.C. § 504(a) (2017).



311

See  *Midlantic*, 474 U.S. at 496, 507; *see also*  *In re Chateaugay*, 944 F.2d at 1009 (citing  *Midlantic*, 474 U.S. at 507).


312

See  841 F.2d 147, 150-51 (6th Cir. 1988).


313

Surface Mining Control and Reclamation Act of 1977, Pub. L. No. 95-87, 91 Stat. 445 (codified as amended at  18 U.S.C. § 1114 (2017); and 30 U.S.C. §§ 1201-1211,  1231-1328 (2017)).



314

See  *Whizco*, 841 F.2d at 147-48.

315

See  *id.* at 148-49; *see also* 11 U.S.C. § 727(a)(1) (providing that individuals can obtain a discharge in Chapter 7, though firms cannot).


316

See  *Whizco*, 841 F.2d at 148 (“[T]he Act does not allow the Secretary the alternative remedy of reclaiming the site and demanding payment for the costs incurred”); *cf.*  42 U.S.C. § 9607(a)(4)(A)-(B) (2017) (providing for recovery of response costs under CERCLA).


317

 *Whizco*, 841 F.2d at 150-51.

318

See  *id.* at 150 (emphasizing that “the defendant does not have the physical capacity to reclaim the mine site himself” and thus the government’s desired remedy was essentially monetary).

319

This issue is especially challenging if the responsible party does not own the site, but rather has an obligation as an operator, transporter, or generator at a property owned by a third party. *See*  42 U.S.C. § 9607(a) (enumerating parties responsible under CERCLA). An entity that no longer owns or controls a site can argue that it lacks the obligation under *Kovacs* not to maintain a current nuisance.

320

See *Reorganized Peabody Energy Corp. v. County of San Mateo (In re Peabody Energy Corp.)*, No. 16-42529-399, 2017 WL 4843724, at *1 (Bankr. E.D. Mo. Oct. 24, 2017); *see also* Matt Egan, *First Coal Bankruptcy of Trump Era*, CNN BUS. (Nov. 1, 2017, 3:12 PM ET), <https://perma.cc/56FP-NASB>. Peabody, a leading private-sector coal company and member of the Fortune 500, *see All About Peabody*, PEABODY, <https://perma.cc/6LD5-J7HZ> (archived Oct. 20, 2018), is not alone among major coal firms who have recently filed bankruptcy petitions. Other firms that have filed for bankruptcy within the last five years include Alpha Natural Resources, Arch Coal, Armstrong Energy, Patriot Coal, Walter Energy, and Xinerdy.

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

See Arathy S Nair, *Peabody Chapter 11 Tops String of U.S. Coal Bankruptcies*, REUTERS (Apr. 15, 2016, 1:00 PM), <https://perma.cc/5694-AL99>.

321 See *In re Peabody Energy*, 2017 WL 4843724, at *1.

322 See *id.* at *1-2.


323 See *id.*




324 See *id.* at *5 & n.4.


325 See *id.* at *5 n.4.

326 See *id.* at *5.



327 See *id.* at *6-8.


328 The Supreme Court has held that *federal* common law nuisance claims seeking injunctive relief to limit greenhouse gas emissions are preempted by the Clean Air Act. See  *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 415 (2011).


In a separate case, in June 2018, a district court dismissed the City of Oakland's federal common law claims for public nuisance, which sought damages for sea level rise against the five largest investor-owned fossil fuel firms. See  *City of Oakland v. BP P.L.C.*, 325 F. Supp. 3d 1017, 1019, 1021, 1028 (N.D. Cal. 2018). While the city originally pleaded state law claims, the court had held earlier that any nuisance claims were federal in nature. See  *id.* at 1021-22 (citing  *California v. BP P.L.C.*, Nos. C 17-06011 WHA & C 17-06012 WHA, 2018 WL 1064293, at *5 (N.D. Cal. Feb. 27, 2018)). The city has filed a notice of appeal.

See Plaintiffs' Notice of Appeal,  *City of Oakland*, 325 F. Supp. 3d 1017 (No. 3:17-cv-06011-WHA). It remains to be seen how the California plaintiffs' state law claims will fare. See Notice of Removal by Defendants Chevron Corp. & Chevron U.S.A., Inc. ¶¶ 13-21, *County of San Mateo v. Chevron Corp.*, No. 3:17-cv-04929-MEJ (N.D. Cal. Aug. 24, 2017), 2017 WL 3700338 (arguing that San Mateo's claims, which it pleaded under state nuisance law, are properly understood as federal common law claims, and should be dismissed).

329 The California plaintiffs have filed a notice of appeal. See Notice of Appeal & Statement of Election, *In re Peabody Energy*, 2017 WL 4843724 (No. 16-42529-399).

330  11 U.S.C. § 363(f) (2017). Such “interests” of entities other than the estate are those that could be asserted against the buyer of the assets under the doctrine of successor liability, such as liens or liabilities to third parties that could lower the value of the property at the time of sale. See  *Morgan Olson L.L.C. v. Frederico* (*In re Grumman Olson Indus., Inc.*), 467 B.R. 694, 702-03 (S.D.N.Y. 2012).

331 See  469 U.S. 274, 276, 282-83 (1985).

332 See, e.g.,  *In re Gen. Motors Corp.*, 407 B.R. 463, 508 (Bankr. S.D.N.Y. 2009) (“The Environmental Matters Objectors understandably would like New GM to satisfy cleanup obligations that were the responsibility of Old GM, on theories of successor liability [H]owever, the property may be sold free and clear of such claims.”).

333 *In re La Paloma Generating, Co.*, No. 16-12700 (CSS), 2017 WL 5197116, at *1 (Bankr. D. Del. Nov. 9, 2017), *appeal dismissed as moot sub nom.* *Cal. Air Res. Bd. v. La Paloma Generating Co.*, No. 1:17-CV-1698, 2018 WL 3637963 (D. Del. July 31, 2018); see also California Global Warming Solutions Act

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

of 2006, ch. 488, 2006 Cal. Stat. 3419 (codified as amended at CAL. HEALTH & SAFETY CODE §§ 38500-38599 (West 2018)).

334 See *In re La Paloma*, 2017 WL 5197116, at *2, *4.

335 See *id.* at *2.

336 See *id.* at *1-2 (explaining that the allowances due in November 2018 (after the confirmation of La Paloma's plan and after the sale) covered emissions from 2015 until 2017, when La Paloma still operated the facility).

337 See *id.* at *6, *8-9.

338 California's motion for a stay pending appeal was denied. See Order, *In re La Paloma*, 2017 WL 5197116 (No. 16-12700 (CSS)).

339 The boundary between what lies inside or outside a firm has long vexed corporate law scholars, see, e.g., Vincent S.J. Buccola, *Opportunism and Internal Affairs*, 93 TUL. L. REV. 339, 340-42 (2018), but a bright line is not required here. Cf. Coglianesi & Nash, *supra* note 11, at 5-6 (arguing that management-based regulation can address significant environmental problems by “leverag[ing] the informational advantage of managers within business organizations, enlisting them to identify ways to solve the specific problems created by their facilities' operations”).

340 See, e.g., Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961 (2001) (making the normative claim that legal analysis should promote the maximization of welfare). Kaplow and Shavell's approach leaves open the question of what form of value maximization would achieve this goal.

341 See Richard A. Posner, Observation, *The Economic Approach to Law*, 53 TEX. L. REV. 757, 759 (1975) (noting the expansion of the use of economics in legal analysis from economic regulation and antitrust to broader areas including negligence doctrine, contract law, property law, criminal law and procedure, civil and administrative procedure, and legislative theory, among others).

342 See Exec. Order No. 12,291, §§ 2-4, 3 C.F.R. 127, 128-30 (1981); Exec. Order No. 12,866, § 1, 3 C.F.R. 638, 638-40 (1993), reprinted as amended in 5 U.S.C. § 601 app. at 94, 95 (2017); see also Richard H. Pildes & Cass R. Sunstein, *Reinventing the Regulatory State*, 62 U. CHI. L. REV. 1, 128 (1995) (categorizing Executive Order 12,866 as embodying a positive shift toward prioritizing regulatory efficiency).

343 See generally, e.g., JOHN RAWLS, A THEORY OF JUSTICE (1971).

344 See KYSAR, *supra* note 29, at 150-75; see also Joseph Mazer, *Liberal Justice, Future People, and Natural Resource Conservation*, 38 PHIL. & PUB. AFF. 380 (2010) (arguing that people in the present owe each other a duty to conserve natural resources for people in the future).

345 See Thomas Donaldson & James P. Walsh, *Toward a Theory of Business*, 35 RES. ORGANIZATIONAL BEHAV. 181, 196 (2015) (“Business participants are accountable not just to their contemporaries but to their ancestors and descendants too.”); see also sources cited *supra* note 26.

346 See Donaldson & Walsh, *supra* note 345, at 196.

347 See generally RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH (2008) (discussing the historical application of cost-benefit analysis and suggesting ways for this methodology to better reflect environmental and health-related goals). But see Mark Sagoff, *Economic*

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

Theory and Environmental Law, 79 MICH. L. REV. 1393, 1396 (1981) (“[A]ttempts to base environmental law on economic theory must fail.”).

348 See, e.g., Esty, *supra* note 17, at 65 (“By reducing scrap and waste, [businesses] enhance their resource productivity--and cut costs.”).

349 See Posner, *supra* note 341, at 777; see also *id.* at 777-78 (arguing that justice means “efficiency”).

350 See Michael E. Porter & Mark R. Kramer, *Creating Shared Value: How to Reinvent Capitalism--and Unleash a Wave of Innovation and Growth*, HARV. BUS. REV., Jan.-Feb. 2011, at 62, 64 (“[T]he principle of shared value ... involves creating economic value in a way that *also* creates value for society by addressing its needs and challenges.”); see also DANIEL C. ESTY & ANDREW S. WINSTON, GREEN TO GOLD: HOW SMART COMPANIES USE ENVIRONMENTAL STRATEGY TO INNOVATE, CREATE VALUE, AND BUILD COMPETITIVE ADVANTAGE 10-14 (2006) (arguing that firms should adopt an “environmental lens” to achieve “upside benefits,” manage “downside risks,” and promote environmental stewardship).

351 See, e.g., Robert G. Eccles et al., *The Impact of Corporate Sustainability on Organizational Processes and Performance*, 60 MGMT. SCI. 2835, 2849 (2014) (citing empirical studies of the relationship between sustainable practices and financial performance whose findings “rang[e] from a positive to a negative to a U-shaped, or even to an inverse-U-shaped relation,” but critiquing these studies); Joshua D. Margolis & James P. Walsh, *Misery Loves Companies: Rethinking Social Initiatives by Business*, 48 ADMIN. SCI. Q. 268, 273-77, 282 (2003) (reviewing thirty years of research on the link between corporate social and financial performance and finding a “positive association, and certainly very little evidence of a negative association” between the two).

352 See Eccles et al., *supra* note 351, at 2849.

353 See *id.* at 2836.

354 See *id.* at 2835-36. Other factors that distinguished high sustainability performers included greater attention by the board of directors to issues of sustainability, active engagement with stakeholders, and better internal measurement and reporting. *Id.* at 2836.








355 See *id.* at 2836.

356 *Id.* (emphasis omitted).

357 Several environmental law scholars have articulated principles addressing these tradeoffs in the traditional environmental regulatory context, but not in the context of the law governing the corporation. See, e.g., DANIEL A. FARBER, ECO-PRAGMATISM: MAKING SENSIBLE ENVIRONMENTAL DECISIONS IN AN UNCERTAIN WORLD 199-202 (1999) (acknowledging the tradeoffs between environmental and economic values in traditional environmental law and regulation, and advocating that environmental policy keep a pragmatic “balance” between them while taking a long-term view); Holly Doremus, *Constitutive Law and Environmental Policy*, 22 STAN. ENVTL. L.J. 295, 335-39 (2003) (offering a “constitutive approach” that expresses values and helps identify conflicts but does not seek to resolve them directly); Robert R.M. Verchick, *Feathers or Gold?: A Civic Economics for Environmental Law*, 25 HARV. ENVTL. L. REV. 95, 137 (2001) (offering a “pragmatic” approach to resolving tradeoffs that rejects absolutism and embraces eclecticism and contextualism).

My account builds on these prior efforts while acknowledging the distinct institutional context of the law of the corporation as compared to traditional environmental law and regulation. Such contextual differences include different statutes with different legal baselines, values, and mandatory factors to be considered; agencies and other institutions with nonenvironmental missions considering those factors in their enforcement and interpretation; and different levels of government addressing these issues at different scales.


- 358 Cf. FARBER, *supra* note 357, at 58, 200 (rejecting absolutist approaches to environmental regulation as unlikely to endure and insufficiently respectful of other values); Verchick, *supra* note 357, at 132-33 (noting that pragmatism cautions against absolutism).
- 359 Cf. FARBER, *supra* note 357, at 12, 94 (arguing that traditional environmental laws and regulations already incorporate a baseline commitment to environmental values, and that “[o]nly when the costs are grossly disproportionate to the benefits should we abandon this baseline”).
- 360 Although scholars articulate the content of such duties in different ways, many have acknowledged that we owe duties of environmental conservation to future generations. *See, e.g., id.* at 149-62 (recognizing a duty to future generations and critiquing current “discounting” techniques for valuing present lives over future lives); KYSAR, *supra* note 29, at 150-55, 163-64 (favoring respect for the needs of future generations but critiquing Rawls’s “just savings” approach, among others, for failing to recognize the incommensurability of environmental goods); DEREK PARFIT, REASONS AND PERSONS 377-78 (1984) (arguing that objections to policies that lower quality of life in the future can be “just as strong” even when such policy choices affect the identity of those persons who will be alive in the future); RAWLS, *supra* note 343, at 284-88 (reasoning that if parties to the original position did not know the generation to which they would belong, they would conclude that “[e]ach generation must ... put aside in each period of time a suitable amount of real capital accumulation” on behalf of future generations); Mazor, *supra* note 344 (arguing that a present duty exists to conserve natural resources for future people).
- 361 Cf. WCED Report, *supra* note 29, ¶ 27 (defining development as sustainable when “it meets the needs of the present without compromising the ability of future generations to meet their own needs”); KYSAR, *supra* note 29, at 180 (“[T]he distinction between ‘weak’ and ‘strong’ conceptions of sustainability in environmental economics hinges essentially on whether the policy analyst is willing to defer to the claims of natural scientists that some natural resources should be treated as beyond measurement and trading, as lexically prior to the framework of market exchange.”).
- 362 *See generally* KYSAR, *supra* note 29 (arguing for a precautionary, rather than welfare-maximizing, approach to environmental law); Light, *supra* note 39 (favoring a precautionary approach to allocations of authority to address climate change across different levels of government); Cass R. Sunstein, *Irreversible and Catastrophic*, 91 CORNELL L. REV. 841 (2006) (arguing that irreversible and catastrophic harms like climate change warrant a precautionary approach).
- 363 Cf. WCED Report, *supra* note 29, ¶ 38 (“The ability to anticipate and prevent environmental damage requires that the ecological dimensions of policy be considered at the same time as the economic, trade, energy, agricultural, and other dimensions. They should be considered on the same agendas and in the same national and international institutions.”); *see also* Esty, *supra* note 17, at 29 (“[E]cological health and economic progress are deeply intertwined.”).
- 364 For example, one might argue that antitrust law, which can either mandate or prohibit environmentally positive behavior, *see supra* Parts III.A.2, III.B, is not concerned about environmental values at all, but rather about “output suppressing” practices. Under this view, antitrust law rejects restraints on competition regardless of whether they promote or harm the environment. Under the environmental priority principle, however, interpreters and enforcers of antitrust law would be obligated to examine the environmental implications of their decisions and to give substantive weight to those environmental considerations in interpreting the antitrust laws, rather than creating environmental effects by happenstance. Thanks to Herbert Hovenkamp for discussions on this point.
- 365 Cf. Richard L. Revesz, *Regulation and Distribution*, 93 N.Y.U. L. REV. 1489 (2018) (calling for the establishment of an interagency body to address the “negative distributional consequences” of the regulatory state, rather than addressing them through the tax system).

- 366 *Cf.* Lazarus, *supra* note 3 (focusing on persuading the U.S. Supreme Court to treat environmental values as distinctive).
- 367 *See supra* text accompanying notes 273-74.
- 368 *See supra* note 238.
- 369 *See supra* text accompanying note 40.
- 370 *See*  TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976) (using the “reasonable investor” language to define what is material); Williams, *supra* note 25, at 1227-46 (demonstrating that the legislative history of the securities laws is consistent with broader social and environmental disclosures); *supra* notes 133-34 and accompanying text.
- 371 Indeed, the SEC has taken actions in related contexts that run counter to the environmental priority principle. For example, in 2018 the SEC began to take the position in no-action letters that certain shareholder proposals relating to climate change were properly excluded, as they aimed at micromanaging the firm's ordinary business under Rule 14a-8(i)(7). *See* Sarah E. Fortt, *SEC Staff Permits “Micro-Management” Argument to Exclude Climate Change Proposals*, VINSON & ELKINS: CLIMATE CHANGE BLOG (Apr. 27, 2018), <https://perma.cc/MEC7-AKR9>; *see also* 17 C.F.R. § 240.14a-8(i)(7) (2018) (providing that a firm can exclude a shareholder proposal that “deals with a matter relating to the company's ordinary business operations”).
- 372 *See*  State Oil Co. v. Khan, 522 U.S. 3, 20-21 (1997) (“Congress ‘expected the courts to give shape to the [Sherman Act's] broad mandate by drawing on common-law tradition.’” (quoting  Nat'l Soc'y of Prof'l Eng'rs v. United States, 435 U.S. 679, 688 (1978)));  Standard Oil Co. of N.J. v. United States, 221 U.S. 1, 50-62 (1911) (using common law reasoning to define “restraint of trade”); Thomas W. Merrill, *The Common Law Powers of Federal Courts*, 52 U. CHI. L. REV. 1, 44-45 (1985) (describing the antitrust laws as “delegated lawmaking” that confer enforcement power on the federal courts).
- 373 *See supra* text accompanying notes 151-54.
- 374 *See supra* notes 220-21 and accompanying text.
- 375 *See supra* text accompanying note 222. If the market in which a sustainability restraint existed did not encompass an entire fishery or natural resource commons, there could be a greater risk that the output limitation is mere “greenwashing.” *See* Laufer, *supra* note 268, at 255-56; *cf. supra* note 268 and accompanying text (discussing the possibility of greenwashing in the benefit corporation context). Thanks to Herbert Hovenkamp for raising this point. In some cases, it may be possible for an industry standard to encompass an entire commons, though this would not likely be the case for the global climate. For significant cumulative harms like climate change, the principle would permit the valuing of incremental environmental improvements or reductions in degradation.
- 376 *See supra* Part III.E.
- 377 *See*  Young v. United States, 535 U.S. 43, 50 (2002) (noting that bankruptcy courts are “courts of equity” that “appl[y] the principles and rules of equity jurisprudence” (alteration in original) (quoting  Pepper v. Litton, 308 U.S. 295, 304 (1939))); *see also*  Pepper, 308 U.S. at 304-05 (noting that the equitable powers of bankruptcy courts “have been invoked to the end that fraud will not prevail, that substance will not give way to form, that technical considerations will not prevent substantial justice from being done”); *cf.* Adam J. Levitin, *Toward a Federal Common Law of Bankruptcy: Judicial Lawmaking in a Statutory Regime*, 80

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

AM. BANKR. L.J. 1, 3-4 (2006) (noting that bankruptcy courts sit as courts of equity, but recommending a federal common law approach for adjudicating questions not answered by the statutory text).



378

See  469 U.S. 274 (1985); *supra* notes 306-08 and accompanying text.

379

See *supra* notes 320-29 and accompanying text.

380

See  *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting) (“It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”), *abrogated by*  *W. Coast Hotel Co. v. Parrish*, 300 U.S. 379 (1937).

381

See *supra* notes 264-66 and accompanying text.

382

Cf. Cary Coglianese & Jennifer Nash, *Government Clubs: Theory and Evidence from Voluntary Environmental Programs*, in *VOLUNTARY PROGRAMS: A CLUB THEORY PERSPECTIVE* 231, 254-55 (Matthew Potoski & Aseem Prakash eds., 2009) (observing that the more stringent the entry standards in voluntary environmental programs, the lower the participation).

383

See generally Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the “Race-to-the-Bottom” Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210 (1992).

384

See *supra* note 251 and accompanying text.

385

See Geczy et al., *supra* note 238, app. A at 130-31 (listing state constituency statutes).

386

See *id.* at 127 (“We cannot rule out that constituency statutes had *some* effect on [high fiduciary duty institutions] investment, but we can rule out that these investors significantly altered investment behavior after the passage of the statutes”). The authors cautioned that their findings might not generalize to the case of investment in “alternative purpose firms,” including those authorized by benefit corporation statutes, which go beyond giving firm managers discretion to consider broader stakeholder interests. See *id.* at 129.

387

Cf. Light, *Regulatory Horcruxes*, *supra* note 18, at 1662-65 (discussing SEC environmental disclosures as an example of such regulatory fragmentation).



388

Of course, these external actors may be subject to their own deregulatory pressures, but a discussion of such pressures is outside the scope of this Article.

389

See GUIDO CALABRESI, *THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS* 311-12 (5th prt. 1977) (noting that the fault system in tort law “carr[ies] moral connotations” but advocating instead a system in which the costs of accidents are allocated to those who can “avoid accidents most cheaply”).

390

See  *Moore v. Texas*, 137 S. Ct. 1039, 1048 (2017) (quoting  *Hall v. Florida*, 134 S. Ct. 1986, 1992 (2014)).

391

See Yair Listokin, *Law and Macroeconomics: The Law and Economics of Recessions*, 34 YALE J. ON REG. 791 (2017) (arguing that because the economy functions differently at the “zero lower bound” (when short-term interest rates reach zero), the law should be interpreted differently at that time).

392

Cf. Neil Gunningham et al., *Social License and Environmental Protection: Why Businesses Go Beyond Compliance*, 29 LAW & SOC. INQUIRY 307, 331 (2004) (noting multidirectional influences between the social and legal licenses to operate).

THE LAW OF THE CORPORATION AS ENVIRONMENTAL LAW, 71 Stan. L. Rev. 137

71 STNLR 137

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South, North, International Environmental Law, and International Environmental Lawyers

Karin Mickelson

Global environmental trends have reached a dangerous crossroads as the new century begins, according to State of the World 2001, which was released today by the Worldwatch Institute, a Washington-based research organization. Signs of accelerated ecological decline have coincided with a loss of political momentum on environmental issues, as evidenced by the recent breakdown of global climate talks . . .

Global Environment Reaches Dangerous Crossroads, Worldwatch News Release, 13 January 2001¹

The tradition of the oppressed teaches us that the “state of emergency” in which we live is not the exception but the rule. We must attain to a conception of history that is in keeping with this insight . . .

Walter Benjamin, *Theses on the Philosophy of History*²

Environmentalists are often accused of being doomsayers, warning about the possibility of ecological catastrophe. However, increasingly, it appears that their predictions are all too accurate. There are, in a wide variety of areas, unmistakable signs that the environmental devastation prophesied in the late 1960s is occurring. Species loss is estimated to be occurring at an unprecedented rate, and it is now generally accepted that anthropogenic climate change is underway. The Worldwatch Institute news release excerpted above goes on to state: “New scientific evidence indicates that many global ecosystems are reaching dangerous thresholds that raise the stakes for policymakers. The Arctic ice cap has already thinned by 42 per cent, and 27 per cent of the world’s coral reefs have been lost, suggesting that some of the planet’s key ecological systems are in decline . . . Environmental degradation is also leading to more severe natural disasters, which have cost the world \$608 billion over the last decade—as much as in the previous four decades combined.”³

What is troublesome, then, is not doomsaying;⁴ rather, it is how little atten-

¹ *Global Environment Reaches Dangerous Crossroads*, Worldwatch News Release, 13 January 2001, <<http://www.worldwatch.org/alerts/010113.html>>.

² Walter Benjamin, *Theses on the Philosophy of History*, in *Illuminations: Essays and Reflections*, 253, at 257 (Hannah Arendt, ed., Harry Zohn, trans., 1968).

³ See *Global Environment Reaches Dangerous Crossroads*, *supra* note 1.

⁴ Though there may well be something to the view that such attitudes are counterproductive and that they are more likely to disempower than to galvanize. That, however, is a topic for another essay.

tion seems to be devoted to the fact that for many people these are already apocalyptic times. Famine, pestilence, war, and death—they reign supreme in all too many parts of the world. And one cannot help but wish that a bit more energy went into convincing people that what is happening now is just as catastrophic as what is being predicted. It is just that those in the North are not having to confront it—at least not yet. Consider other statistics. The 1999 United Nations Human Development report informs us that “[t]he income gap between the fifth of the world’s people living in the richest countries and the fifth in the poorest was 74 to 1 in 1997, up from 60 to 1 in 1990 and 30 to 1 in 1960.”⁵ The same Worldwatch Institute news release cited above notes that 1.2 billion people lack access to clean water, while 1.1 billion are undernourished and underweight.

The fact that large numbers of people are living in misery does not mean that we should ignore environmental concerns. However, it should be obvious that those who are already living in catastrophic situations can hardly be expected to respond eagerly to appeals to stave off environmental catastrophe. For more than thirty years, the South has been attempting to convey the desperate circumstances in which many of its peoples exist and to convince the international community of the ways in which these circumstances are inextricably connected with environmental degradation.⁶ Few have maintained that the South should simply sacrifice the environment in its rush to develop. Instead, the South has insisted that while environmental problems are among the most urgent facing the international community, they cannot be separated from other challenges that are equally as serious and as devastating. Environmental problems have to be addressed, but not in isolation from a host of other factors. They need to be understood in a broader economic, social, cultural, and historic context.

The premise for this article is that international environmental lawyers have failed to fully respond to that broader context and to confront the differing perspectives of the South and North as a central, if not *the* central, debate regarding the conceptual foundation of their discipline. What I seek to

⁵ United Nations Development Programme, *Overview: Globalization with a Human Face*, <<http://www.undp.org/hdro/overview.pdf>>, at 3.

⁶ To speak of a “Southern,” “Third World,” or “developing country” perspective on the highly complex set of issues that are lumped together under the environmental rubric may be problematic in and of itself. There are, of course, significant divisions between developing countries, which play out in different ways on different issues. One notable example is the diametrically opposed positions of the small island states, represented by the Alliance of Small Island States, on the one hand, and the oil-producing states, on the other, with respect to climate change. Nevertheless, there has tended to be considerable cohesion in regard to environmental issues in general. The Group of 77 and China, in particular, has played a significant role in presenting a more or less unified front in the context of multilateral negotiations. I would argue that one need not posit that the South is monolithic in order to speak meaningfully of its role in the development of international environmental law. See also Karin Mickelson, *Rhetoric and Rage: Third World Voices in International Legal Discourse* 16 *Wis. Int’l L.J.* 353 (1998).

argue may well appear counterintuitive, if not outrageous, given the many ways in which the South–North dimension has influenced the development of international environmental law. Differentiated responsibilities, technology transfer provisions, and financial assistance mechanisms—these are woven into the very fabric of international environmental treaty regimes⁷ and are an inescapable feature of international diplomacy. And few would deny that of the many challenges facing international environmental law and policy, the South–North divide is one of the most significant. Nevertheless, my thesis is that international environmental law *as a discipline* has failed to respond to Third World concerns in a meaningful fashion. Indeed, it has accommodated these concerns at the margins, as opposed to integrating them into the core of the discipline and its self-understanding.

In attempting to develop and defend this rather sweeping accusation, I propose to consider two aspects of the standard “accommodationist” approach. First, there is a tendency to provide an ahistorical account of the evolution of international environmental law. Second, the South is, implicitly or explicitly, portrayed as a grudging participant in environmental regimes rather than recognized as an active partner in an ongoing effort to identify the fundamental nature of environmental problems and the appropriate responses thereto. I proceed to explore the ramifications of the standard approach in the context of an examination of the principle of “common but differentiated responsibilities.” I conclude by pleading in favour of an “integrationist” approach—one that brings the concerns of the South into the mainstream of the discipline.

I. AHISTORICISM

Consider the way in which the story of international environmental law is presented in four treatises on the subject: Patricia Birnie and Alan Boyle, *International Law and the Environment*;⁸ Alexandre Kiss and Dinah Shelton, *International Environmental Law*,⁹ Ved Nanda, *International Environmental Law and Policy*,¹⁰ and Philippe Sands, *Principles of International Environmental Law I: Frameworks, Standards and Implementation*.¹¹ In most of these works, there appears to have been an effort to present an historical context for international environmental law. Sands, in fact, emphasizes the

⁷ For a survey, see John Ntambirweki, *The Developing Countries in the Evolution of an International Environmental Law* 14 Hastings Int'l & Comp. L. Rev. 905 (1991).

⁸ Patricia W. Birnie and Alan E. Boyle, *International Law and the Environment* (1992). The second edition of the work is planned for publication in 2001.

⁹ Alexandre Kiss and Dinah Shelton, *International Environmental Law* (2nd edn., 2000). The first edition of the work was published in 1991.

¹⁰ Ved P. Nanda, *International Environmental Law and Policy* (1995).

¹¹ Philippe Sands, *Principles of International Environmental Law I: Frameworks, Standards and Implementation* (1995).

importance of history, asserting that “although the current form and structure of the subject has only become recognisable within the past decade, a proper understanding of modern principles and rules requires a historic sense of earlier scientific, political and legal developments.”¹² However, an examination of the historical dimension of these works reveals that the discussion tends to be limited to the ways in which concerns about issues such as species conservation and various forms of pollution predated the modern environmental era.¹³ To a large extent, the early history of international environmental law is narrated as a series of agreements, strung along in chronological order, with perhaps a passing judgment as to their “progressiveness” (or lack thereof) from an environmental or ecological standpoint.¹⁴ Little or no effort is made to portray the conditions to which these agreements were meant to respond or the broader political and economic backdrop against which they emerged. From there, a jump is usually made to the latter half of the twentieth century, particularly to the 1960s, when the “real story” of international environmental law is said to have begun with the emergence of ecological consciousness.

What might the history of international environmental law look like from the perspective of the South? The emergence of a truly global environmental consciousness might well be traced back considerably further. There are many potential entry points into this alternative perspective, but let us take one with specific legal content: the *Western Sahara* advisory opinion.¹⁵ It will be recalled that the International Court of Justice (ICJ) rejected the application of the *terra nullius* doctrine to the territory of the Western Sahara because Spanish control over the territory at the time of colonization had

¹² *Id.*, at 25.

¹³ For example, Birnie and Boyle provide almost no historical background in their introductory chapter, which is limited to a consideration of a series of preliminary questions such as “What is International Environmental Law?” followed by a survey of the sources of international environmental law; *supra* note 8, at 1–31. Kiss and Shelton have one chapter entitled “Origin and Evolution of International Environmental Law,” which is divided into three sections, the first of which deals with international environmental law before the Stockholm Conference, *supra* note 9, at 55–63. The section surveys a series of conservation treaties and agreements dealing with water and marine pollution and goes on to discuss the emergence of fundamental principles in the area of transfrontier pollution, culminating in a discussion of the emergence of “the present ecological era” beginning at the end of the 1960s. Nanda has a chapter entitled “The Early Years,” which briefly surveys international agreements and case law prior to the Stockholm Conference; *supra* note 10, at 73–82. Sands devotes an entire lengthy chapter to the history of international environmental law; *supra* note 11, at 25–62. While his treatment is the most comprehensive of those texts considered, it tends to remain quite narrow in its focus. In particular, his discussion of the period prior to the establishment of the United Nations (“[f]rom early fisheries conventions to the creation of the United Nations,” *id.*, at 26–9) largely follows the same pattern of the other treatises in providing a survey of instruments and arbitral decisions. For a similar treatment, see also David Hunter, Jim Salzman, and Durwood Zaelke, *International Environmental Law and Policy* (1998), Chapter 6 of which is entitled “A Brief History from Stockholm to Rio.”

¹⁴ See, for example, Kiss and Shelton, *supra* note 9, at 55–7.

¹⁵ *Western Sahara* advisory opinion, [1975] ICJ Rep. 12 [hereinafter *Western Sahara*].

been achieved through the conclusion of a series of agreements with local rulers. The ICJ asserted that the peoples of the Western Sahara had a right to self-determination. Many commentators have celebrated the *Western Sahara* opinion. Yet, I would argue that the most insightful analysis was not carried out by the court or by any of its members, but rather by Mohammed Bedjaoui in his statement on behalf of Algeria.¹⁶ Bedjaoui engaged in a long and detailed analysis of the ways in which the *terra nullius* doctrine had been used throughout the period of colonial expansion in order to justify taking the territory of those individuals that did not satisfy the colonialists' definition of peoples capable of exercising sovereign jurisdiction. Implicitly inviting the ICJ to come to terms with how the colonial powers used international law to legitimate their expansionist activities, Bedjaoui insisted that it should be acknowledged that the Western Sahara had been treated as *terra nullius*, in fact, if not according to the strict legal definition of the term. Regardless of what agreements might have been concluded, Spain treated the Western Sahara as "appropriable" territory, which is, of course, precisely how *terra nullius* is defined.

The court declined Bedjaoui's invitation, but his insight, I would argue, can be applied on a broader scale. In effect, from the time when international law emerged in its classic form,¹⁷ most of the globe has been treated as *terra nullius*, open to appropriation by any "civilized" state. And, to a remarkable extent, civilization itself was defined in terms of rational exploitation of resources for the purposes of economic development. John Stuart Mill, for example, wrote in 1848:

These [outlying possessions of ours] are hardly to be looked upon as countries . . . but more properly as outlying agricultural or manufacturing estates belonging to a larger community. Our West Indian colonies, for example, cannot be regarded as countries with a productive capital of their own . . . [but are rather] the place where England finds it convenient to carry on the production of sugar, coffee and a few other tropical commodities.¹⁸

The drive to appropriate resources was not presented, and, arguably, not even understood, as being purely predatory. There was, in fact, no necessary contradiction between resource utilization and the humanitarian impulse. Instead, it could be said that both the colonizer and the colonized benefited from the arrangement. This notion received perhaps its clearest articulation

¹⁶ ICJ Pleadings, *Western Sahara*, vol. 4, 448 (1982).

¹⁷ For a compelling argument to the effect that the colonial encounter was central to the formation of international law, see Antony Anghie, *Francisco de Vitoria and the Colonial Origins of International Law* 5 Soc. & Legal Stud. 321 (1996); Antony Anghie, *Finding the Peripheries: Sovereignty and Colonialism in Nineteenth-Century International Law* 40 Harv. Int'l L.J. 1 (1999).

¹⁸ John Stuart Mill, *Principles of Political Economy*, 693 (J.M. Robson, ed., University of Toronto Press, vol. 3, 1965) (1848); as quoted in Edward W. Said, *Culture and Imperialism* 59 (1993).

in *The Dual Mandate in British Tropical Africa* by Sir Frederick Lugard,¹⁹ who is widely regarded as being one of the foremost writers on colonialism. Margery Perham, his biographer and a well-known commentator on colonialism in her own right, asserts that the book was generally recognized as “an authoritative justification of Britain’s annexation and government of tropical Africa.”²⁰ Lugard writes: “For the civilised nations have at last recognised that while on the one hand the abounding wealth of the tropical regions of the earth must be developed and used for the benefit of mankind, on the other hand an obligation rests on the controlling Powers not only to safeguard the material rights of the natives, but to promote their moral and educational progress.”²¹

That colonialism was in part justified through the dangling prospect of a new and seemingly inexhaustible source of resources is part of the history every schoolchild learns. What is perhaps less well known is that the awareness of the fact that those resources were in fact quite exhaustible can also be traced to the colonial era. Environmental historians, such as Richard Grove, have documented the close connections between scientific conservationism and colonialism.²² As Grove notes, “the history of the colonial periphery is now emerging as vital to an understanding of perceptions of the global environment, both for historians and historians of science . . . [I]t was in the tropical colonies that scientists first came to a realisation of the extraordinary speed at which people, and Europeans in particular, could transform and destroy the natural environment.”²³ Grove goes on to state:

Current preoccupations with a “global” environmental crisis about pollution, climate change and resource over-use are now the problems of everyman and everywoman and of all states. But they were foreshadowed in the early days of empire by the dramatic globalisation of economic and natural transformations that was enabled during the colonial period. The often (although not always) grievous ecological impact of westernisation and empire, which took centuries to take effect, is now felt almost everywhere, and is probably irreversible. It is this fateful globalisation which has forced an environmental agenda upon historians, among many others. But it has, I think, also forced a new historical agenda upon the scientists.²⁴

I would argue that this historical agenda has been forced upon international environmental lawyers as well, since it is against this historical backdrop that the emergence of international environmental law has to be understood.

To make such a statement is not simply to restate the obvious: that the colonial background of international law is one that international environmental

¹⁹ Lord Lugard, *The Dual Mandate in British Tropical Africa* (Archon Books, 5th edn., 1965) (1922).

²⁰ Margery Perham, *Introduction*, in *ibid.*, at xxix.

²¹ Lugard, *supra* note 19, at 18.

²² See Richard H. Grove, *Ecology, Climate and Empire: Colonialism and Global Environmental History, 1400–1940* (1997).

²³ *Id.*, at 1.

²⁴ *Id.*, at 4.

law shares. It is hardly as simple, or as innocent, as that. Take, for example, two of the early conservation treaties that international environmental law treatises mention, the 1900 Convention for the Preservation of Wild Animals, Birds and Fish in Africa²⁵ and the 1933 Convention on the Preservation of Flora and Fauna in Their Natural State.²⁶ As agreements that were entered into by a group of colonial powers with respect to Africa, they had the obvious flaw of failing to apply to their metropolitan territories. Charges of hypocrisy aside, however, the particular vision of conservation embodied in the treaties was both problematic and illuminating.

From an environmental standpoint, these treaties might even be said to have been ahead of their time. The 1900 convention was the result of a conference on game protection that has been characterized as the “first ever ‘international’ environmental conference.”²⁷ It was a response to the concern over species that had already become extinct throughout the course of the previous century and the prospect of further extinctions.²⁸ Its aim, as set out in the preamble, was to prevent the uncontrolled massacre, and to ensure the conservation, of various species of wild animals in Africa. P. van Heijnsbergen notes that it was “the first multilateral convention to be concerned with the protection of a large number of species of land animals and it also was the first to make use at an international level of such techniques as the introduction of protected areas and export limitation.”²⁹ While the instrument failed to gain the requisite number of ratifications and never entered into force, it had a significant effect within parts of Africa. The British, in particular, used this international instrument to justify a series of legislative efforts on conservation.³⁰ The most criticized aspect of the 1900 convention was that it listed not only protected species but also “noxious species” that were to be specifically targeted for eradication.³¹ Van Heijnsbergen asserts that with this exception, “the Convention’s approach is modern in its aim to protect habitats.”³²

²⁵ Convention for the Preservation of Wild Animals, Birds and Fish in Africa, 94 British and Foreign State Papers 715; a summary is available in *International Protection of the Environment: Treaties and Related Documents 1607* (Bernd Rüster and Bruno Simma, eds., vol. 4, 1975).

²⁶ Convention on the Preservation of Flora and Fauna in Their Natural State, United Kingdom Treaty Series No. 27 (1930), reprinted in *International Protection of the Environment: Treaties and Related Documents*, *supra* note 25, at 1693. It is also available at <<http://www.fletcher.tufts.edu/multi/texts/BH142.txt>>. The treaty was concluded by Belgium, Egypt, France, Italy, Portugal, Spain, South Africa, Sudan, and the United Kingdom. France and Spain never ratified.

²⁷ Ramachandra Guha, *Environmentalism: A Global History* 45 (2000).

²⁸ P. van Heijnsbergen, *International Legal Protection of Wild Fauna and Flora* 13 (1997).

²⁹ *Id.*

³⁰ See John M. MacKenzie, *The Empire of Nature: Hunting, Conservation and British Imperialism* 208 (1988). See also van Heijnsbergen, *supra* note 28 at 14.

³¹ The list, which included lions, leopards, and hyenas, was based on either these animals representing competition for hunting or their harmfulness to humans.

³² van Heijnsbergen, *supra* note 28, at 14.

The 1933 convention went even further, recognizing the need for the protection of habitat in the form of national parks and strict nature reserves as well as the importance of buffer zones around such protected areas. It also discards the distinction between useful and harmful species.³³ Its broader significance led one commentator to characterize it as “the Magna Carta of wildlife preservation.”³⁴ The text of the treaty contemplates its potential applicability outside of the African context,³⁵ and, in fact, India acceded to it in 1939. The convention was also intended to provide a framework for ongoing discussion regarding conservation problems not only in Africa but also in other parts of the colonial world.³⁶ The 1933 convention came into force in 1936, and it was only in 1968 that the framework that it had established was replaced by the African Convention on the Conservation of Nature and Natural Resources.³⁷

It is unfortunate that the 1900 and 1933 conventions are usually cited only as examples of the small handful of treaties that could be said to reflect an awareness of the need for resource conservation. To imply that these documents are of “historical interest only” represents the loss of a unique opportunity to understand both the process of environmental degradation and the response thereto within a broader context. Environmental degradation does not arise in a vacuum. It frequently has certain benefits associated with it, and it obviously has certain costs. And all too frequently, some derive the benefits while others bear the costs. What discussions in the international environmental law treatises neglect to mention is that both conventions were largely a response to the threat to species that was posed by European expansion into the African continent, both directly through hunting and indirectly through the encroachment of habitat brought on by agricultural activities and settlement.³⁸ In the case of the 1933 convention, in particular, although its scope was quite broad, it was aimed primarily at controlling the activities of “natives.” In other words, it impacted quite harshly on the lives of Africans who had not seriously contributed to the problem and who had no possibility of influencing how conservation would be undertaken. As one commentator notes in regard to Southern Africa,

³³ MacKenzie draws a distinction between “preservationist” and “conservationist” stages in this progression. See MacKenzie, *supra* note 30, Chapter 8, “From Preservation to Conservation: Legislation and the International Dimension,” at 200.

³⁴ van Heijnsbergen, *supra* note 28, at 16.

³⁵ *Id.*, at 17.

³⁶ Thus, as van Heijnsbergen notes, “a second conference on Africa was held in 1938, at which a third meeting was foreseen to discuss the conservation problems of Asia and the Pacific. This conference was never held, owing to the political situation at the time.” *Id.*, at 17.

³⁷ African Convention on the Conservation of Nature and Natural Resources, 15 September 1968, 1001 UNTS 3; also available at <http://fletcher.tufts.edu/multi/texts/african_convention.txt>.

³⁸ See, generally, MacKenzie, *supra* note 30. For an indication that this is not just a present-day characterization, see also S.S. Hayden, *The International Protection of Wildlife* 21–5 (1942).

[w]here did the African fit into all this? To be precise, nowhere. The white settler identified with the land but not with the men and women who had dwelt there long before their arrival . . . In game reserves Africans were barred from hunting, while in national parks they were excluded altogether, forcibly dispossessed of their land if it fell within the boundaries of a designated sanctuary. Conservation was even viewed as "part of the white man's necessary burden to save the nation's natural heritage from African despoilation." But this was a convenient ahistorical belief which glossed over the butchery of European hunting in the early decades of colonialism. If there was indeed a "crisis of African wildlife," this crisis had been created by the white man's gun and rifle, not the native spear and sling shot.³⁹

II. WHAT IS THE ROLE OF THE SOUTH?

Supposing one were willing to concede, in response to the foregoing discussion, that there is a certain indifference to history in many accounts of the evolution of international environmental law. Many might argue that this does not by any means indicate a lack of attention to the concerns of the South in the treatment of the "current form and structure of the subject," as Philippe Sands puts it.⁴⁰ Indeed, to argue that these concerns have not been squarely addressed seems absurd, given the amount of attention that they have received. What account of international environmental law overlooks the South-North dimension? How can it plausibly be said that this topic has been ignored or neglected?

I should begin by conceding that a great deal of attention has been paid to the South. However, there is a difference between paying attention and paying heed. Much of the attention seems to have been focused on the question of how the South might be brought into environmental regimes, as opposed to how international environmental law and policy might be conceptualized in order to represent an inclusive framework that represents the interests and *perspectives* of the South and North alike. In other words, as noted previously, the South is portrayed as a grudging participant in environmental regimes rather than as an active partner in an ongoing discussion regarding what the fundamental nature of environmental problems is and what the appropriate responses should be. In order to illustrate this point, it is necessary to turn back to history, albeit of a more recent variety.

The United Nations Conference on the Human Environment, which was held in Stockholm in 1972, illustrates this tension all too clearly.⁴¹ Stockholm is frequently depicted as the result of the North succeeding in persuading the South that the environmental crisis was in fact a common challenge. There is no doubt that there was resistance to the idea of the conference on the part of

³⁹ Guha, *supra* note 27, at 46.

⁴⁰ Sands, *supra* note 11, at 25.

⁴¹ See *Report of the United Nations Conference on the Human Environment*, Stockholm, UN Doc. A/CONF.48/14/Rev. 1 (1973).

many Third World countries. This reluctance might be attributed to a lack of awareness of how serious a set of environmental problems the international community was facing. However, it is more plausible to argue that there was a great deal of awareness of the fact that environmental problems were largely being defined in terms of pollution and, since pollution was the result of industrialization, it did not represent an immediate concern for developing countries. While developing countries were aware that "pollution doesn't respect borders," they insisted that the "environmental" problems facing them had to be defined more broadly in order to encompass the negative effects of poverty as well as those of prosperity.

All of these arguments are clearly reflected in the *Founex Report on Development and Environment*, which was the outcome of a meeting of experts that was held in Founex, Switzerland.⁴² The meeting was convened by Maurice Strong, who was then secretary-general of the Stockholm Conference, in an attempt to promote developing country support for the conference. It has been characterized as not being particularly "environmental" in its focus,⁴³ and, in fact, most of the participants were either from developing countries or working in the development area, so the focus was squarely on the imperative of development. This overarching commitment did not prevent the panel from emphasizing the need to incorporate environmental concerns into an expanded understanding of development:

While the concern with human environment in developing countries can only reinforce the commitment to development, it should serve . . . to provide new dimensions to the development concept itself. In the past, there has been a tendency to equate the development goal with the more narrowly conceived objective of economic growth as measured by the rise in gross national product. It is usually recognized today that high rates of economic growth, necessary and essential as they are, do not by themselves guarantee the easing of urgent social and human problems. Indeed in many countries high growth rates have been accompanied by increasing unemployment, rising disparities in income both between groups and between regions, and the deterioration of social and cultural conditions. A new emphasis is thus being placed on the attainment of social and cultural goals as part of the development process. The recognition of environmental issues in developing countries is an aspect of this widening of the development concept.⁴⁴

From this perspective, the incorporation of environmental concerns had to be seen in a broader context. The panel went on to assert that "[t]he redefinition of development objectives must include greater stress on income distribution

⁴² *Founex Report on Development and Environment*, submitted by a Panel of Experts Convened by the Secretary-General of the United Nations Conference on the Human Environment, 4–12 June 1971, Founex, Switzerland, International Conciliation no. 586, at 7 (January 1972) [hereinafter *Founex Report*].

⁴³ Peter Stone, *Did We Save the Earth at Stockholm?* 102–3 (1973) (describes the meeting as "long on economists but short on the ecological side").

⁴⁴ *Founex Report*, *supra* note 42, at 11.

and employment, more attention to social services and welfare-oriented public goods, and greater provision for political participation.”⁴⁵ The report also stressed the need to meet the needs of the poorest members of society: “[T]he quality of life in a poor society should be defined in terms of a selective attack on the problems of mass poverty.”⁴⁶ In short, the vision of development put forward in the Founex report cannot by any means be said to correspond to the vision of economic growth at all costs. In fact, it had many of the “motherhood” sentiments that came to be regarded as the mantras of sustainable development fifteen years or so later.

The report was, of course, intended to be a reassuring document and to address the concerns expressed by developing countries with respect to the emergence of global environmental protection. Thus, it also mentions some of the potential advantages, namely the ways in which measures of environmental protection might in fact promote development. It highlights the possibility of revitalizing the commitment to poverty alleviation:

There is . . . the prospect that the global concern with the environment may reawaken the concern for elimination of poverty all over the globe. An emerging understanding of the indivisibility of the earth’s natural systems on the part of the rich nations could help strengthen the vision of a human family, and even encourage an increase in aid to poor nations’ efforts to improve and protect their part of the global household.⁴⁷

What is striking, however, is that the document as a whole seems to be almost as much about expanding the First World view of the environmental crisis as the Third World view of the developmental one. On the latter front, it appears to have been a resounding success. The meeting and the report were crucial in terms of coalescing developing country support for the conference initiative and in ensuring their participation.⁴⁸ Many of the concerns that were highlighted in the report went on to become focal points of debate at the conference, as well as during the preparatory process, and were reflected in the final wording of the Stockholm Declaration.⁴⁹

The importance of this point cannot be overemphasized. Stockholm is perhaps the single most significant event in the history of international environmental law. With the exception of the socialist states, which were not

⁴⁵ *Id.*, at 22.

⁴⁶ *Id.*

⁴⁷ *Id.*, at 30–1.

⁴⁸ See, generally, Stone, *supra* note 43, at 102–18.

⁴⁹ Declaration on the Human Environment, Stockholm Declaration, UN Doc. A/CONF.48/14 /Rev.1. 1973 (16 June 1972), 11 ILM 1416 (1972) [hereinafter Stockholm Declaration]. See, in particular, paragraph 4 of the preamble and Principles 8–12 of the declaration, which are also available at <<http://www.tufts.edu/departments/fletcher/multi/texts/STOCKHOLM-DECL.txt>>. Alexandre Timoshenko has asserted that “Principles 8–16 were to a large extent based on the conclusions of the Founex Report.” *From Stockholm to Rio: The Institutionalization of Sustainable Development*, in *Sustainable Development and International Law*, 143, at 144 (Winfried Lang, ed., 1995). See also UN General Assembly Resolution on Environment and Development, GA Res. 2849 (XXVI) (adopted 20 December 1971), *reprinted* in 11 ILM 422 (1972).

represented at the conference,⁵⁰ it was a global gathering, while all previous multilateral conferences and the resulting agreements had been limited in their scope. It might be said that the story of *international* environmental law begins with the emergence of a sense of collective responsibility *vis-à-vis* the global environment, for which Stockholm becomes a convenient shorthand.⁵¹ From this perspective, the conference, and the declaration, in particular, are clear starting points for tracing a new consciousness—a different way of thinking about a particular set of problems.⁵² This new way of thinking involved an awareness of the environment/development interface from the very outset.⁵³

Nonetheless, the achievements of Founex and Stockholm, with respect to expanding the First World understanding of global challenges, are somewhat more difficult to gauge. While the conference did emphasize the developmental aspects of environmental protection, there appears to have been a tendency to see this emphasis as reflecting, at least in part, a “concession” to the Third World—that is, a political compromise. However, as it happened, this was a time when the Third World was seeking fundamental change rather than concessions. The period following Stockholm displayed the peak of optimism regarding the possibility of bringing about a transformation of the international system. The 1974 Cocoyoc Declaration, which was adopted at the United Nations Environment Programme/United Nations Conference on Trade and Development Symposium on Resource Use, Environment, and Development Strategies,⁵⁴ exemplifies this shift in perspective. Less than three-and-a-half years separate Founex and Cocoyoc, but the difference in tone between them is striking. What Founex had hinted at, Cocoyoc underscored, in terms that were both direct and forceful:

Much of the world has not yet emerged from the historical consequences of almost five centuries of colonial control which concentrated economic power so overwhelmingly in the hands of a small group of nations. To this day, at least three quarters of the world’s income, investment, services and almost all of the world’s research are in the hands of one quarter of its people . . .⁵⁵

⁵⁰ This was a response to a decision, the effect of which was to exclude the German Democratic Republic from participation. See the discussion in Stone, *supra* note 43, at 89–95. It was not intended to represent an objection to the conference or to its goals (*id.*, at 94).

⁵¹ Sands, for example, while identifying four distinct periods in the evolution of international environmental law, does acknowledge that the Stockholm Conference marked the beginning of global coordination and cooperation. Sands, *supra* note 11, at 25.

⁵² In other words, the Stockholm Declaration would be the equivalent for international environmental law of what the Universal Declaration of Human Rights is for international human rights law. For an interesting discussion of this analogy as well as a comprehensive survey of the declaration, see Louis B. Sohn, *The Stockholm Declaration on the Human Environment* 14 Harv. Int’l L.J. 423 (1973).

⁵³ See also Timoshenko, *supra* note 49, at 143–4.

⁵⁴ Cocoyoc Declaration (adopted 8–23 October 1974), reprinted in *The International Law of Development: Basic Documents, 1753* (A. Peter Mutharika, ed., 1979), at 1765–77 [hereinafter Cocoyoc Declaration].

⁵⁵ *Id.*, at 1766.

[P]re-emption by the rich of a disproportionate share of key resources conflicts directly with the longer-term interests of the poor by impairing their ultimate access to resources necessary for their development and by increasing their cost . . .⁵⁶

The overall effect of such biased economic relationships can best be seen in the contrast in consumption. A North American or a European child, on average, consumes outrageously more than his Indian or African counterpart—a fact which makes it specious to attribute pressure on world resources entirely to the growth of third world population.⁵⁷

The outrage regarding the injustice of the existing international system, however, was coupled with a commitment to rethinking mainstream models of development:

[W]e emphasize the need for pursuing many different roads of development. We reject the unilinear view which sees development essentially and inevitably as the effort to imitate the historical model of the countries that for various reasons happen to be rich today. For this reason, we reject the concept of “gaps” in development. The goal is not to “catch up,” but to ensure the quality of life for all with a productive base compatible with the needs of future generations.⁵⁸

Cocoyoc came in the midst of the drive for a new international economic order. In fact, it came immediately before the Charter of Economic Rights and Duties of States was adopted by the United Nations General Assembly.⁵⁹ It exemplified the optimism of that time: “We have faith in the future of [humankind] on this planet. We believe that ways of life and social systems can be evolved that are more just, less arrogant in their material demands, more respectful of the whole planetary environment.”⁶⁰ This optimism was to dissipate all too quickly in the cold light of the 1980s and the debt crisis, although the concerns reflected in the declaration did not.

What these documents reveal is that from the time the environment emerged as an important item on the global agenda, there was a clear sense that the emergence of a truly “international” environmental law hinged on the acceptance of a broader definition of environmental concerns than might originally have been envisaged. Why, then, was there the resistance to incorporate this type of definition? Given the extent to which these issues were being discussed and debated, why did it take fifteen years to get these types of concerns brought into the mainstream of international environmental law and policy? One possible explanation is that at the time of the Stockholm conference, it was quite plausible to argue that the issues of greatest concern were those arising from so-called “over-development,” of which oil pollution and the dumping of wastes at sea were notable examples. The concerns of devel-

⁵⁶ Cocoyoc Declaration, *supra* note 54, at 1767.

⁵⁷ *Id.*

⁵⁸ *Id.*, at 1770.

⁵⁹ Charter of Economic Rights and Duties of States, GA Res. A/3281 (XXIX) (12 December 1974), *reprinted in* 14 ILM 251 (1974).

⁶⁰ Cocoyoc Declaration, *supra* note 54, at 1776.

oping countries could be seen as being, to some extent, peripheral. As the focus shifted from such relatively narrow environmental issues to broad-based concerns, such as ozone depletion, and finally culminated in attempts to deal with global environmental problems, such as climate change and the loss of biological diversity, it became abundantly clear that the developmental aspect of international environmental law was critical.

However, I would argue that something more fundamental was involved: an unwillingness to acknowledge that “environmentalism” itself was open to varying interpretations. An analogy might be drawn to the argument advanced by Ramachandra Guha and Juan Martinez-Alier, the authors of a book entitled *Varieties of Environmentalism: Essays North and South*.⁶¹ They question the conventional wisdom that holds that environmental concern is necessarily a “post-materialist” phenomenon—that is to say, that it arises after a certain basic level of material well-being has been achieved. As they note, “[t]he implication is that the poor are not green either because they lack awareness (with no taste for environmental amenities when faced with more immediate necessities), or because they have not enough money (yet) to invest in the environment, or both reasons together.”⁶² Guha and Martinez-Alier point out that a distinction can be drawn between an “environmentalism of the rich” and an “environmentalism of the poor.” While the post-materialist explanation might well account for the former, it is totally inappropriate for the latter form: “The environmentalism of the poor originates as a clash over productive resources . . . In Southern movements, issues of ecology are often interlinked with questions of human rights, ethnicity and distributive justice.”⁶³ Building on the premise of Guha and Martinez-Alier, one might argue that the environmentalism of the rich has the luxury of valuing the environment for its own sake quite apart from its value to humans. It then takes this idea one step further and defines environmentalism in those terms. Any perspective that focuses on the interrelationships between human beings and their environment then becomes suspect.⁶⁴

By analogy, one might argue that the international system is also characterized by (at least) two different visions of environmentalism. This argument

⁶¹ Ramachandra Guha and Juan Martinez-Alier, *Varieties of Environmentalism: Essays North and South* (1997).

⁶² *Id.*, at xiv.

⁶³ *Id.*, at 18.

⁶⁴ Furthermore, environmentalism is then seen by definition as a phenomenon of post-industrial society. This definition, however, overlooks the fact that modern industrial society does not have a monopoly on ecological imbalance; human beings throughout history have had to respect ecological limitations as a matter of pragmatic adaptation to their particular circumstances. This is one of the basic points that Vice President Weeramantry of the International Court of Justice made in his separate opinion in the Case Concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia), (Judgment of 25 September 1997), *reprinted in* 37 ILM 162 at 215 (1998), available at <http://www.icj-cij.org/icjwww/idocket/ihs/ihsjudgement/ihs_ijudgment_970925_frame.htm>.

would certainly call into question the conventional understanding of international environmental law as being driven primarily by concerns for the environment (primarily on the part of the North) and having to respond to concerns about development (primarily on the part of the South). One might then argue that international environmental law has developed as an attempt to develop consensus around differing ways of interpreting the relationship between environment and development. Lest I be accused of ignoring the extent to which governments posture, it is worth recalling that much of the commentary on the role of non-governmental organizations (NGOs) at the United Nations Conference on Environment and Development (UNCED) highlighted the extent to which a South–North divide has also existed within the NGO community.⁶⁵ Southern NGOs were much more likely to define environmental problems as being linked with developmental problems, which was, of course, exactly what Southern governments were doing. It is, in any event, misleading to say that these differences are superficial or that they can be dismissed as bad faith.

It is perhaps understandable that one could fail to see an “alternative environmentalism” in stances taken by the South in regimes ranging from ozone depletion to global warming, in which it has sought and obtained different and often less rigorous obligations. What is disturbing is the unspoken assumption that the Third World would in fact always take a stand “against” the environment, always have to be coerced into such measures through incentives or disincentives of one form or another. Such a portrayal ignores issues with regard to which developing countries have taken a lead role in attempting to develop effective international regimes, such as the hazardous waste trade.⁶⁶ In this area, which is clearly analogous to the struggles of the environmental justice movement in the United States and elsewhere,⁶⁷ an “environmentalism of the poor” appears to be a plausible explanation.

International action in the hazardous wastes arena was spurred on by a series of incidents involving waste disposal in developing countries during the late 1980s, which resulted in widespread media coverage and in an increasing perception that the Third World was going to be used as a dumping ground for the wastes of the North.⁶⁸ From the outset, this was clearly an issue in which the developing countries, with strong support from environmental

⁶⁵ See, for example, Ann Doherty, *The Role of Nongovernmental Organizations in UNCED*, in *Negotiating International Regimes: Lessons Learned from the United Nations Conference on Environment and Development*, 199, at 211–12 (G. Sjöstedt *et al.*, eds., 1994). The main difference may be that the non-governmental organizations were more willing to listen to each other and to try to develop common positions.

⁶⁶ See the discussion in Marian A.L. Miller, *The Third World in Global Environmental Politics* 87–107 (1995).

⁶⁷ See, for example, *Toxic Struggles: The Theory and Practice of Environmental Justice* (Richard Hofrichter, ed., 1993).

⁶⁸ Miller, *supra* note 66, at 87.

NGOs, took the initiative. Their goal was an outright ban on the export of hazardous wastes from the North to the South. The NGOs supported this view, in part, because they were determined that the convention that they were developing should be not only about the regulation of the transport of hazardous wastes but also about their reduction at source.⁶⁹ The developed countries, on the other hand, were adamant about the need to maintain the freedom of movement. Not least among their arguments was the fact that importing states should be free to accept shipments of hazardous wastes "in exchange for financial or other benefits."⁷⁰ There was something paradoxical about this argument. As one writer notes in this context, "the developed countries were more concerned with the sovereign rights of receiving states than were the Third World countries themselves."⁷¹

The resulting Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention)⁷² was a compromise between these two positions. Realizing that some flexibility would have to be incorporated into the regime, the developing countries agreed that the convention would regulate, rather than ban, exports. However, the demands for a ban did not disappear. Instead, the developing countries promptly requested such a ban at the first Conference of the Parties. This request led to the adoption of a decision to ban exports from developed to developing countries at the second meeting in 1994.⁷³ This decision was formalized the following year through the adoption of an amendment to the Basel Convention.⁷⁴ The amendment, which requires ratification by three-quarters of those parties present at the time of its adoption, has yet to enter into force.⁷⁵ In the end, dissatisfaction with the Basel regime led many developing states to impose more stringent requirements, including unilateral or regional bans. For example, the African states negotiated a regional agreement that imposed a ban on the import of hazardous wastes onto the African continent.⁷⁶

⁶⁹ *Id.*, at 96–7. See, generally, Jennifer Clapp, *The Toxic Waste Trade with Less-Industrialised Countries: Economic Linkages and Political Alliances* 15 *Third World Quarterly* 505 (1994).

⁷⁰ Miller, *supra* note 66, at 92.

⁷¹ *Id.*

⁷² Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 1673 UNTS No. 28911 (5 May 1992) *reprinted in* 28 *ILM* 649 (1989), also available at <<http://www.basel.int/text/text.html>>.

⁷³ Decision II/12, *in* Decisions Adopted by the Second Conference of the Parties to the Basel Convention, Geneva, Switzerland, 25 March 1994, available at <<http://www.basel.int/meetings/sbc/cop/cop-2.htm>>.

⁷⁴ Decision III/1, *in* Decisions Adopted by the Third Conference of the Parties in Geneva, Switzerland, 18–22 September 1995, available at <<http://www.basel.int/meetings/sbc/cop/cop3-b.htm>>. To be specific, the amendment prohibits the export of hazardous waste from parties listed in a proposed Annex VII (members of the European Community and the Organization for Economic Cooperation and Development and Liechtenstein) to all other parties.

⁷⁵ The number of ratifications required is sixty-two. As of 12 January 2001, twenty-two states had ratified. More information is available at <<http://www.basel.int/ratif/ratif.html>>.

⁷⁶ Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (Bamako Convention). 29

One wonders why the Basel Convention, as a clear instance of the South taking the initiative to develop an environmental regime despite the objections of the developed world, appears to be left out of the equation in many assessments of the South's commitment (or lack thereof) to international environmental law.⁷⁷ Perhaps it is because the leadership role in the hazardous waste context can be characterized as driven by self-interest, as is the lack of leadership on other issues. This, it would seem, is the crux of the problem. There appears to be no willingness to concede that environmental interests can be defined and understood in ways other than the dominant or mainstream approach. As long as the Third World is perceived as pursuing other interests, there is no real effort to define environmental problems from an alternative, more inclusive, perspective.

In the 1980s, the work of the World Commission on Environment and Development and, in particular, the publication of its report *Our Common Future* in 1987⁷⁸ went a long way towards mainstreaming many of the concerns that had been voiced by developing countries since the lead-up to Stockholm. It popularized the notion of sustainable development that has now become an inescapable aspect of international environmental law and policy. It also made it crystal clear that equity concerns had to be factored into the equation. The official confirmation of the new orthodoxy was supposed to come with UNCED, the so-called "Earth Summit." Stockholm had been about the "human environment"; Rio would be about "environment and development." On the surface, the juxtaposition of these two issues in the official title of the conference said it all. However, as was to become all too evident in the process leading up to the event, this facile conclusion hid a multitude of tensions and debates. José Goldemberg of the University of São Paulo, a leading Brazilian negotiator, stated the conflict in the clearest possible terms:

The principal tension during the UNCED preparatory process concerned its emphasis: would the Earth Summit emphasize development and poverty or environmental protection and sustainability? In my view, the idea that the Rio Conference could become a conference on development and not environment was a "midsummer night's dream"—nothing more than a naïve fantasy. Global environmental degradation, and, in particular, the greenhouse problem, is a consequence of affluence, principally the burning of oil and coal. Local environmental degradation, on the other hand, is intimately linked with poverty. The industrialized countries were not particularly interested in addressing the root causes of poverty, which had been the focus of North-

January 1991, 30 ILM 775 (1991), available through the Basel Convention website at <<http://www.basel.int/Misclinks/bamako.html>>.

⁷⁷ Occasionally the role of the South is even left out of specific discussions of the hazardous waste regime. See, for example, Kiss and Shelton, *supra* note 9, at 539–46 (whose sole reference to the South's role is a sentence stating that the African states did not consider the Basel Convention to be satisfactory).

⁷⁸ World Commission on Environment and Development, *Our Common Future* (1987).

South confrontation for the last thirty years. Limiting the outcome at UNCED to a much less ambitious target—reducing dangerous emissions of greenhouse gases at moderate cost—seemed to be the unspoken goal of most of the leading industrialized countries in Rio.⁷⁹

While the latest generation of environmental agreements appear to be more responsive to developing country concerns, this fact might actually be seen as part of the problem. There is still a tendency to view international environmental law as having to “respond” to the Third World rather than viewing it as something that represents a common ground between South and North. The UN Framework Convention on Climate Change (UNFCCC)⁸⁰ and the Convention on Biological Diversity⁸¹ are said to reflect a series of compromises, and criticism of these documents frequently focuses on precisely those aspects that are “developmental.”⁸² The role of the South, one might argue, is still viewed as that of the laggard, delaying the development of effective and meaningful responses to environmental degradation.

III. COMMON BUT DIFFERENTIATED RESPONSIBILITIES

At this point, some might wonder: How does this matter to us in what we do as international environmental lawyers? What difference does it make how commentators characterize the concerns of developing countries? As long as they recognize that it is essential to come to terms with what the developing countries want, surely that should suffice? I think it makes a great deal of difference. As an example, I would like to consider the notion of “common but differentiated responsibilities,” which can be said to be a fundamental principle of international environmental law.⁸³ I would argue that the two aspects

⁷⁹ José Goldemberg, *The Road to Rio, in* Negotiating Climate Change: The Inside Story of the Rio Convention, 175, at 177 (Irving L. Mintzer and J. Amber Leonard, eds., 1994).

⁸⁰ United Nations Framework Convention on Climate Change, 9 May 1992, 31 ILM 849 (1992), available at <<http://www.unfccc.de/resource/conv/conv.html>> [hereinafter UNFCCC].

⁸¹ Convention on Biological Diversity, 5 June 1992, reprinted in 31 ILM 818 (1992), also available at <<http://www.biodiv.org/convention/articles.asp>> [hereinafter CBD].

⁸² For example, Alan Boyle, *The Rio Convention on Biological Diversity, in* International Law and the Conservation of Biological Diversity, 33, at 49 (Michael Bowman and Catherine Redgwell, eds., 1996) (mentions as one of the weaknesses of the CBD the fact that “[i]ts driving force is as much the allocation of economic benefits to the developing world and a reorientation of the world economy as it is a concern with conservation and sustainable use”). Similarly, Marc Pallemærts, *International Environmental Law from Stockholm to Rio: Back to the Future?* in *Greening International Law*, 1, at 6 (Philippe Sands, ed., 1993) (in regard to the UNFCCC, is critical of the “precedence of national economic development policies over national and international measures to check climate change”).

⁸³ Certainly, it would have to be considered as such by the South. Nevertheless, there appears to be some uncertainty as to its actual status. Sands includes it among a number of “general rules and principles which have broad, if not necessarily universal, support and are frequently endorsed in practice.” Sands, *supra* note 11, at 183, the principle’s content is discussed at 217–20. Kiss and Shelton, on the other hand, include it in their discussion of the conceptual framework of international environmental law (that is, as one of the concepts on which international

of the accommodationist approach that have been discussed to this point coalesce in the context of the treatment of this principle and make it difficult if not impossible to understand its importance from a Southern perspective.

What is striking about the principle of common but differentiated responsibilities is that depending on the perspective brought to bear on it, it can reflect totally different ways of thinking about the respective roles of South and North in addressing environmental degradation. On the one hand, it can simply reflect a pragmatic acceptance of, and response to, the fact of differing levels of financial and technological resources available to countries in different economic circumstances. On the other hand, it can be said to reflect an acknowledgment of the historic, moral, and legal responsibility of the North to shoulder the burdens of environmental protection, just as it has enjoyed the benefits of economic and industrial development largely unconstrained by environmental concerns. Implicit in the latter view is a sense that the North has received a disproportionate share of the benefits of centuries of environmentally unsustainable development, and the underprivileged in the South have borne many of its costs. What is the proper interpretation? Is it a question of *ability* to pay or *responsibility* to pay?

To answer that question, it may be useful to consider the differences between Principle 7 of the Rio Declaration on Environment and Development and the original version that was proposed by the Group of 77 and China (G-77). Principle 7 provides:

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystems. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.⁸⁴

The G-77 formulation read as follows:

All States share a common but differentiated responsibility for containing, reducing, and eliminating global environmental damage and for restoring the ecological balance of the Earth, in accordance with their respective responsibilities and capabilities. The major cause of the continuing deterioration of the global environment is the unsustainable pattern of production and consumption, particularly in the developed countries. All countries, particularly developed ones, shall make commitments to address their unsustainable patterns of production and consumption. In view of their main historical and current responsibility for global environmental degradation and their

environmental law is based, along with sustainable development, the common heritage of mankind, the common concern of humanity, and the rights of future generations) rather than in their discussion of general legal principles. Kiss and Shelton, *supra* note 9, at 257-8.

⁸⁴ Rio Declaration on Environment and Development, UN Doc. A/CONF.151/5/Rev. 1 (Vol. I) 3, 4 (14 June 1992), reprinted in 31 ILM 874 (1992).

capability to address this common concern, developed countries shall provide adequate, new and additional financial resources and environmentally sound technologies on preferential and concessional terms to developing countries to enable them to achieve sustainable development.⁸⁵

The two provisions reflect significant differences in perspective. The G-77 proposal is not merely premised on the notion of responsibility, it also sets out in the clearest possible terms what that responsibility rests upon. While Principle 7 does not evade the notion of responsibility altogether, it does exclude any references to historic contributions to environmental damage, and it is generally far less accusatory in its tone. As one commentator recently noted,

[o]f particular significance is what developed States are responsible for; whereas in Principle 7, developed States acknowledge responsibility “that they bear in the international pursuit of sustainable development,” in the G77 proposal, developed States have the “main responsibility . . . for global environmental degradation.” This difference is not just semantics. Whereas in the G77 proposal, developed States are held responsible under international law for past and current acts of environmental degradation, in Principle 7, developed States tried to eliminate notions of legal responsibility, and replace them with the idea of future responsibility in achieving global sustainable development—largely based on their increased financial and technological resource base.⁸⁶

Despite the softened language of Principle 7 (in a soft law instrument, no less), there was considerable concern regarding this provision.⁸⁷ The United States was particularly unhappy and felt compelled to issue an interpretative statement in which it asserted that the principle “highlights the special leadership role of developed countries, based on our industrial development, our experience with environmental protection policies and actions, and our wealth, technical expertise and capabilities.” It went on to assert that in the view of the United States Principle 7 does not “imply a recognition . . . of any international obligations . . . or any diminution in the responsibility of developing countries.”⁸⁸ The commentator that is quoted above goes on to express some surprise regarding the US statement, both because he reads Principle 7 as clearly indicating that “developing countries have different, and to that extent, diminished obligations,” and also because the stance taken appeared to be inconsistent with the US acceptance of the UNFCCC, in which developing states had less comprehensive obligations.⁸⁹ I would argue that the US

⁸⁵ Proposal submitted on behalf of the G77, UN Doc. A/CONF.151/PC/WG.III/L.20/Rev.1 (19 March 1992).

⁸⁶ Duncan French, *Developing States and International Environmental Law: The Importance of Differentiated Responsibilities* 49 *Int'l & Comp. L.Q.* 35, at 37 (2000).

⁸⁷ *Id.*

⁸⁸ Report of the United Nations Conference on Environment and Development, UN Doc. A/CONF.151/5/Rev. 1 (Vol. II), Proceedings of the Conference, at 17.

⁸⁹ French, *supra* note 86, at 37.

position can only be understood in light of what it perceived to be at issue: whose perceptions of the nature of the global environmental crisis and which of the respective roles and responsibilities of the North and South would carry the day.⁹⁰ It is certainly arguable that the US position cannot be equated with that of the rest of the developed countries because it is so much more extreme.⁹¹ Nevertheless, it does shed light on a certain uneasiness that surrounds this issue—a sense that the stakes are higher than they appear to be.

The issue of perspective is particularly relevant because, as various commentators have noted, it is not always easy to specify what the principle entails or what its scope encompasses. Consider, as an example, how the principle developed in the context of the ozone regime, which is widely regarded as a turning point in the evolution of international environmental law and a benchmark against which other regimes are measured. The Montreal Protocol on Substances That Deplete the Ozone Layer (Montreal Protocol),⁹² in particular, which came only thirty months after the conclusion of the framework Vienna Convention for the Protection of the Ozone Layer (Vienna Convention),⁹³ appeared to herald a new age of international environmental law and policy—one that entailed clear and rigorous obligations. In fact, the introduction of the Montreal Protocol may also be said to mark a significant turning point in the perception of the role of developing countries in international environmental negotiations.

The debate regarding ozone depletion began in the North, among and within the nations that were both the major producers and consumers of ozone-depleting substances. Most developing countries showed little interest until 1987 and, thus, played a limited role in the negotiations resulting in the Vienna Convention.⁹⁴ By the time of the negotiations of the Montreal Protocol, however, it was clear that developing countries would have to be involved in addressing the problem. The first stage in ensuring developing country participation was the negotiation of a different schedule for meeting phase-out requirements. Essentially, developing countries whose annual level of consumption of the substances controlled in the protocol was less than 0.3

⁹⁰ I do not consider it a coincidence that the other subject of the US interpretative statement was Principle 3 regarding the right to development. That right represents within the human rights context what the principle of common, but differentiated, responsibilities represents within the environmental context: a clear articulation of Third World aspirations and perspective.

⁹¹ However, as a reviewer of this article has pointed out, “there is increasing evidence that the U.S. articulates what many other countries do not dare to, and the others often hide behind the U.S. position” (comments on file with the author).

⁹² Montreal Protocol on Substances That Deplete the Ozone Layer, 16 September 1987, 26 ILM 154 (1987), also available at <<http://www.unep.ch/ozone/treaties.shtml>> [hereinafter Montreal Protocol].

⁹³ Vienna Convention for the Protection of the Ozone Layer, 22 March 1985, 26 ILM 1529 (1987) also available at <<http://www.unep.ch/ozone/treaties.shtml>>.

⁹⁴ See the discussion in Ian H. Rowlands, *The Politics of Global Atmospheric Change* 165–6 (1995).

kilograms per capita were allowed an additional ten years to meet their obligations.⁹⁵ The Montreal Protocol also encouraged parties to “facilitate access to environmentally safe alternative substances and technology” and to make funds available for such alternatives.⁹⁶

The second stage was the provision of financial resources. Key states, such as India and China, made it clear that they would not join unless significant funding was made available. The desire to get these and other populous states on board was augmented by the fact that it had become clear even before the Montreal Protocol came into force that more drastic control measures were necessary. Thus, the practical need to give developing countries some leeway in meeting their obligations was counterbalanced by the need to ensure that the transition beyond ozone-depleting technologies was made as quickly as possible. The establishment of the Multilateral Fund was the result. While all the developed countries had certain reservations about the fund concept, resistance gradually diminished as it became clear that such a mechanism was essential to ensure key developing country participation.⁹⁷ However, certain members of the United States administration had grave concerns about the fund as a potential precedent, particularly for the climate change regime that was then under discussion. At the London meeting, US representatives insisted that the fund decision was “without prejudice to any future arrangements that may be developed with respect to other environmental issues.”⁹⁸

What, then, does the principle of common but differentiated responsibilities entail in the ozone regime? Richard Benedick, who was part of the US negotiating team for both the Vienna Convention and the Montreal Protocol, has presented a range of possibilities:

It could represent a justifiable effort to achieve equity between richer and poorer states, as reflected by the framers of the original Montreal Protocol in their article 5 provision for a grace period before developing countries had to implement controls on ozone-depleting substances. It could represent a formula for balancing performance by developing countries with the technological and financial assistance made available to them, as articulated in the London Amendment. *Or it could represent an opportunity to extract the maximum possible transfer of wealth, without regard to the economics of the situation, as a precondition for accepting a share of responsibility in protecting the global environment.*⁹⁹

⁹⁵ Montreal Protocol, *supra* note 92, Article 5(1).

⁹⁶ *Id.*, Article 5(2) and (3).

⁹⁷ Rowlands, *supra* note 94, at 173–4.

⁹⁸ Quoted in *id.* at 174. This view does not appear to have been limited to the United States. Writing in 1993, one commentator noted: “While [the fund] had been a successful ad hoc negotiating device in that it persuaded developing countries to actively participate in the instrument, the results soon came to haunt its inventors, as developing countries started to make the same arguments in all ongoing environmental negotiations, including those on climate change and biological diversity.” Hugo M. Schally, *Forests: Toward an International Legal Regime?* 4 *Y.B. Int’l Envtl. L.* 30, at 42 (1993).

⁹⁹ Richard Elliot Benedick, *Ozone Diplomacy: New Directions in Safeguarding the Planet* 241 (enlarged edition, 1998) [emphasis added].

Which of these options one chooses, I would argue, is inextricably connected with the overall perspective one brings to bear on the principle in the first place. Do we see the differing commitments and the funding as the result of fairness or of expediency? What is required is attention to the historical dimension of the problem and its social, political, and economic context. In other words, one cannot answer this question without knowledge of the historic contributions to the problem that developing countries had made as well as the extent to which the ozone regime could be seen as being in part about meeting developmental aspirations (a perception that evolved between 1985 and 1990).

The complexity surrounding the notion of common but differentiated responsibilities in the ozone context pales by comparison with that of climate change. Perhaps no other area has inspired more debate and academic commentary regarding considerations of South–North equity¹⁰⁰ for at least two reasons. Like the ozone regime, this is clearly an area in which the historic contributions of the North far outweigh those of the South.¹⁰¹ More importantly, it is an area in which the sources of the problem are distributed across the globe. According to one estimate, for example, the countries of the South “were responsible for just over 30 per cent of energy-related carbon dioxide emissions in the world” in 1990.¹⁰² Furthermore, a significant proportion of greenhouse gas emissions come from agriculture and land conversion, in which the South’s share is far from insignificant.¹⁰³ The G-77 has been adamant in its refusal to accept any limitation on carbon dioxide emissions, in particular, citing the need (and right) to increase emissions in the course of development. So far, it has been successful. The binding reduction commitments embodied in the Kyoto Protocol to the UNFCCC will apply only to Annex I countries (namely, industrialized economies and economies in transition).¹⁰⁴ This decision has proven to be an ongoing bone of contention. When the Bush administration made it clear that it did not support the protocol, in March 2001, it specifically mentioned that the protocol “exempts the developing nations around the world” in addition to the more widely cited assertion that “it is not in the United States’ economic best interest.”¹⁰⁵

Would the principle of common but differentiated responsibilities provide guidance in this instance? Again, it would depend on one’s perspective. Considered in the abstract—in some kind of game theory ether—the US posi-

¹⁰⁰ See, for example, *Fair Weather? Equity Concerns in Climate Change* (Ferenc L. Toth, ed., 1999).

¹⁰¹ See text accompanying note 106.

¹⁰² Rowlands, *supra* note 94, at 189.

¹⁰³ Rowlands, *id.*, notes that inclusion of such emissions could increase the South’s share of overall greenhouse gas emissions to over 40 per cent.

¹⁰⁴ Article 3 of the Kyoto Protocol to the UNFCCC, 10 December 1997, 37 ILM 22 (1998), also available at <<http://www.unfccc.de/resource/docs/convkp/kpeng.html>>.

¹⁰⁵ See Press Briefing by Press Secretary Ari Fleischer, 28 March 2001, available at <<http://www.whitehouse.gov/news/briefings/20010328.html>>.

tion is not only understandable but defensible. The South cannot simply become a “free rider” on the system, so that all the positive changes and sacrifices the North makes are rendered meaningless. From the perspective of the South, the situation appears somewhat different. One could begin by considering the historic contribution to the problem. One study concluded that between 1800 and 1990 the developed countries cumulatively accounted for over 84 per cent of all carbon dioxide emissions caused by fossil-fuel burning and over 75 per cent of the carbon dioxide emissions associated with deforestation.¹⁰⁶ Given the enormous imbalance, is it really all that much of a stretch to say that the North has appropriated the lion’s share of the carrying capacity of the planet? It is perhaps not surprising that many commentators argue that what the North owes the South in the climate change context, as in many other areas, is an enormous ecological debt.¹⁰⁷ To ask for an acknowledgment of centuries of unequal and inequitable relations between nations and peoples is not necessarily to demand some form of reparation or recompense, though it may be the fear of such an interpretation that led the United States to reject aspects of “common but differentiated responsibilities.” What it does require is a serious commitment to viewing the global-warming crisis in proper historic context rather than dismissing invocations of history as so much rhetoric and hot air.

Similarly, the notion of meeting the developmental needs of the peoples of the South must be seen as a demand for equity rather than merely a bargaining strategy. This premise stands apart from the historical imbalance that was mentioned earlier. Per capita emissions in the present day are similarly skewed. It has been estimated that in relation to fossil carbon dioxide, for example, “per capita emissions are on average about 8 times those of the developing world.”¹⁰⁸ The climate change challenge, therefore, cannot simply be seen as a matter of “reducing” greenhouse gas emissions but also, paradoxically, about *increasing* them. In other words, while global reductions are essential, the overall strategy pursued must reflect the developmental needs of the South, which should, of course, be met in the most energy efficient manner possible. As one commentator puts it, “[T]he north . . . has to reduce its projected consumption patterns, so as to allow the ‘ecological space’ for the south to develop, and the south should be allowed to develop along energy-efficient

¹⁰⁶ Richard A. Warrick and Atiq A. Rahman, *Future Sea Level Rise: Environmental and Socio-Political Considerations*, in *Confronting Climate Change: Risks, Implications and Responses*, 97, at 105 (Irving L. Mintzer, ed., 1992).

¹⁰⁷ Guha and Martinez-Alier, *supra* note 61, at 44–5 (define the notion of ecological debt as: “[c]laiming damages from rich countries on account of past excessive emissions (of carbon dioxide, for example) or for plundering of natural resources”) [emphasis in original]. In relation to climate change, see Anil Agarwal and Sunita Narain, *Global Warming in an Unequal World: A Case of Environmental Colonialism* (1991).

¹⁰⁸ Michael Grubb *et al.*, *Sharing the Burden*, in *Confronting Climate Change: Risks, Implications and Responses*, *supra* note 106, at 330, 307–8.

and resource use minimizing pathways. For this to happen technology and financial transfers on a large scale will be required.”¹⁰⁹ Thus, seeing this question in isolation from its developmental dimensions is fundamentally misleading and leads all too easily to the perception of the Southern stance as a form of “greenmail” or, in other words, a means of achieving through environmental threats what the South was unable to accomplish through persuasion. It reminds me of a question I once had posed to me by a student: At the end of the day, if the average Canadian’s consumption of energy is thirty times that of the average Bangladeshi but there are thirty times as many Bangladeshis as there are Canadians, doesn’t it balance out at about the same thing? Whatever the virtues of such an approach are in terms of simplicity, it leaves a great deal to be desired in terms of fairness.

There is no doubt that the language of historical responsibility and moral accountability has an old-fashioned air, perhaps even a whiff of staleness. And it is not only Northern commentators who find it so. José Goldemberg, for example, deplors what he refers to as the “rhetorical noise of the G-77, replete with the usual arguments on ‘guilt,’ ‘historical responsibility,’ ‘compensation for past deeds’ and the ‘right’ of the poor to 0.7 percent of the GNP of the rich in the form of ODA.”¹¹⁰ There is perhaps a sense that the same drum is being beaten in too many fora, that the Third World should just be pragmatic and get on with the business of saving the planet and getting as much as they can at the same time. As Goldemberg notes, “[t]he developing countries’ goal of eliminating poverty will be achieved only if the motivation for international cooperation is based on a shared sense of enlightened self-interest, rather than on a vague appeal to moral virtue and humanitarian relief.”¹¹¹

Yet, the notions of historical responsibility and intra-generational equity that the G-77 have so steadfastly maintained continue to have value, even if only to nuzzle at the conscience of the more receptive in the North. After all, pragmatism is all very well and good, but how far does it take you? International environmental regimes may include provisions dealing with financing mechanisms and technology transfer, and there may be some degree of recognition that developing countries need support in order to be able to participate in those regimes and to fulfil their obligations. However, one must also consider how controversial technology transfer continues to be and how little is actually being put into those funding mechanisms.¹¹² These are merely

¹⁰⁹ Konrad von Moltke and Atiq Rahman, *External Perspectives on Climate Change: A View from the United States and the Third World*, in *Politics of Climate Change: A European Perspective*, 330, at 343 (Tim O’Riordan and Jill Jäger, eds., 1996).

¹¹⁰ Goldemberg, *supra* note 79, at 179.

¹¹¹ *Id.*, at 185.

¹¹² Not to mention the extent to which the decision to leave control of financing, in the case of both the UNFCCC and the CBD, in the hands of the Global Environment Facility was hugely controversial. *See, generally*, Joyeeta Gupta, *The Global Environment Facility in its North-South Context* 4 *Env’tl. Pol.* 19 (1995).

symptoms of an underlying malaise, one that reflects the ongoing difficulty in arriving at meaningful consensus.

At the present time, there appears to be a growing sense that humanity as a species has monumentally “messed up,” that we have a collective—and urgent—responsibility to address what otherwise might be irreversible damage to the global environment. When I hear this type of analysis, I cannot help thinking of Murray Bookchin’s description of an exhibit on environmental issues at the New York Museum of Natural History.¹¹³ The very last item was a huge mirror with a sign over it that read “The Most Dangerous Animal on Earth.” Bookchin recalls seeing an African-American child standing in front of the mirror while a schoolteacher tried to explain the exhibit’s message. One can only imagine what a child from Mozambique, or Bolivia, or Bangladesh, would feel if confronted with a similar display.

The exhibit clearly was meant to make us acknowledge our collective responsibility as a species—something that may well be necessary given the complacency (or apathy) that still, incredibly, appears to be widespread. Yet Bookchin’s point was that what was implicit in that exhibit was the assumption that differences of class, race, nationality, and gender do not matter—all of us are responsible for the current state of the environment. I would add that the exhibit implied that history does not matter, that no matter how we got here, we are all in this together. “Collective responsibility” is one thing if it is future-oriented and involves an acknowledgment that we all have a role to play in shifting towards a sustainable relationship with the natural world. It is quite another if it obscures both a historical and a contemporary reality of unequal contributions to global environmental problems and thus justifies the proffering of facile and inequitable solutions. To the extent that the principle of common but differentiated responsibilities encapsulates this message, it plays a valuable role in conveying the perspective of the South on global environmental problems. Stripped of its historic and equitable content, it is all but meaningless.

IV. TOWARDS INTEGRATING THE CONCERNS OF THE SOUTH

To this point, two aspects of what I have termed the “accommodationist” approach have been considered: the ahistoricism of many of the standard accounts of international environmental law and the tendency to think of the discipline as having to respond to the concerns of the South instead of seeing the South as an active participant in the ongoing evolution of the discipline. The implications of the failure to come to terms with the South–North dimension were examined in the context of a discussion of the principle of common but differentiated responsibilities. However, I would argue that the potential

¹¹³ Murray Bookchin, *Remaking Society: Pathways to a Green Future* 23 (1990).

ramifications are much broader. What the accommodationist approach reveals, in fact, goes to the heart of our self-understanding as international environmental lawyers. We remain ensconced within our neat little disciplinary boundaries, deluding ourselves into thinking that the world somehow corresponds to them, that ecological integrity, basic human needs, and human rights can be meaningfully dealt with in isolation from each other. Some scholars do so tacitly; others are more straightforward. Sands, for example, makes it clear that international environmental law is only part of the international law of sustainable development: "The international law of sustainable development is . . . broader than international environmental law; apart from environmental issues, it includes the social and economic dimension of development, the participatory role of major groups, and financial and other means of implementation. International environmental law is part of the international law of sustainable development, but is narrower in scope."¹¹⁴ Excluded from this definition, in fact, are not only many of the issues that the South regards as crucial but also the issues that, from almost any point of view, must be seen as critical to the possibility of providing a meaningful response to the environmental challenges that the international community currently faces.

We have failed, I suggest, to think ecologically about our own discipline and to realize how artificial these boundaries are. This failure, in my view, is most obvious when one attempts to debate and discuss the conceptual foundations of international environmental law in the classroom. No matter how hard one tries to get students to grapple with the artificiality of disciplinary boundaries, they seem to take them for granted; no matter how much we speak of interdisciplinarity, or multidisciplinary, they seem to regard these terms as more "academicspeak." And why should they not? The implicit message that they receive in so much of the literature is that these boundaries are real. Of course, one can supplement the standard texts with material designed to present an alternate perspective. There is no dearth of such material: primary sources, such as the Founex report and the Cocoyoc Declaration; secondary literature from the South, such as R.P. Anand's "Environment and Development: The Case of the Developing Countries,"¹¹⁵ *For Earth's Sake: A Report from the Commission on Developing Countries and Global Change*,¹¹⁶ or *Environment and Development: Towards a Common Strategy of the South in the UNCED Negotiations and Beyond*;¹¹⁷ secondary sources from the North, such as Günther Handl's "Environmental Protection and

¹¹⁴ Sands, *supra* note 11, at 14.

¹¹⁵ R.P. Anand, *Environment and Development: The Case of the Developing Countries* 24 *Indian J. Int'l L.* 1 (1980).

¹¹⁶ Commission on Developing Countries and Global Change, *For Earth's Sake: A Report from the Commission on Developing Countries and Global Change* (1992).

¹¹⁷ South Centre, *Environment and Development: Towards a Common Strategy of the South in the UNCED Negotiations and Beyond* (1991).

Development in Third World Countries: Common Destiny—Common Responsibility”¹¹⁸ or Daniel Barstow Magraw’s “Legal Treatment of Developing Countries: Differential, Contextual and Absolute Norms.”¹¹⁹ It is not the same, however, as having such perspectives fully integrated into the mainstream of the discipline.

Can international environmental law be defined or understood in such a way as to reflect these concerns? How do we go beyond the South–North impasse? To attempt to answer these questions requires turning to a consideration of *why* the accommodationist approach seems to inform so much of international environmental law. Perhaps it is because of an anxiety that a broadening of perspective, which would require integrating Third World concerns, would result in a dilution of those concerns directed at environmental protection strictly so-called. (Ironically, one of the concerns addressed in the Founex report was that the focus on the environment would dilute concern for development.) And perhaps there has also been fear that environmental issues would be “hijacked” in order to pursue a “Third World agenda.” However, my own view is that there are two interrelated explanations.

The first explanation, in a nutshell, is that international environmental lawyers see themselves as advocates for the environment. At the 2000 Annual Meeting of the American Society of International Law, one panelist asserted that international lawyers are not respected by their non-internationalist peers because of their inability to distinguish analysis from advocacy.¹²⁰ While many of those individuals who were present found this claim absurd, it may indeed contain a kernel of truth. Most international human rights lawyers, after all, do not simply analyze human rights abuses, but actively work towards minimizing and eliminating them. Even those who do not identify themselves with any particular sub-discipline—a dwindling number given the increasing degree of specialization in the field—tend to see themselves as

¹¹⁸ Günther Handl, *Environmental Protection and Development in Third World Countries: Common Destiny—Common Responsibility* 20 N.Y.U. J. Int’l L. & Pol. 603 (1988).

¹¹⁹ Daniel Barstow Magraw, *Legal Treatment of Developing Countries: Differential, Contextual and Absolute Norms* 1 Colo. J. Int’l Envtl. L. & Pol’y 69 (1990).

¹²⁰ It may be worth quoting the relevant section of this somewhat inflammatory presentation in full:

[T]he legal academy views international law scholarship, on average, as less successful than other legal scholarship by just about any measure, including clarity, insight, theoretical sophistication, persuasiveness and depth. This is related to the fact that international law scholars view themselves as a source of law. Advocacy and scholarship are often mixed up in the international law field, both in the pages of law reviews and (especially) in judicial proceedings. As a general matter, international law scholarship is characterized by normative rather than positive argument, and by idealism and advocacy rather than skepticism and detachment. These methodological commitments preclude international law scholarship from being taken seriously by lawyers, other legal scholars, and courts.

Panel on “Scholars in the Construction and Critique of International Law,” remarks by Jack Goldsmith, 94 Am. Soc’y Int’l L. Proc. 318, at 319 (2000).

“internationalists,” as opposed to those whose (parochial?) interests keep them focused squarely on the domestic sphere. And there is little doubt that the vast majority of those individuals who work in the environmental field are not disinterested observers but rather individuals who are passionately concerned about the state of the global environment. The panelist, of course, was denouncing this type of advocacy stance. I would celebrate it, with a proviso. International environmental lawyers *should* want to change the world. Yet, to acknowledge that one is engaged in advocacy requires an acknowledgment of where one stands as well as of the interest that one (perhaps only implicitly) represents. I would therefore argue that the first step towards integrating the concerns of the South is that international environmental lawyers acknowledge that their vision of international environmental law reflects one version of environmentalism. I was once accused of proposing the “dumbing down of advocacy” when I mentioned this possibility at a workshop.¹²¹ In my view, however, advocacy that builds on, and perpetuates, existing power imbalances may be smart but it is also, quite simply, wrong.

The other explanation cannot be encapsulated quite so neatly. While in the process of writing this article, I came across a passage in a recent work by Michael Ignatieff. Writing about the relationship between Québec and the rest of Canada, he asserted: “The real issue is that we do not share the same vision of our country’s history. The problem is not one of rights or powers, but of truth. We do not inhabit the same historical reality. And it is time we did.”¹²² This quote struck me as capturing the dilemma with which I was struggling. The gulf between South and North is not just one of privilege, but of perception.

Let me give an example. Many will recall the response of one delegate from a developing country to Maurice Strong’s expressed desire for an Earth Charter that every child in the world could hang on his or her bedroom wall. He pointed out that most children in his part of the world do not have bedrooms.¹²³ I have told that anecdote in my class and have quoted it in my writing, as an example of the gulf of perception between South and North. Strong and other commentators had a genuine and legitimate interest in making the Earth Charter accessible and clear. Yet, for me, the response really got at the heart of the matter. As I understood it, the delegate was conveying in a simple and compelling fashion that the most wonderfully inspiring document in the world will not mean anything as long as there are these terrible disparities between those who have and those who have not. I was stunned when I read recently that one (Northern) journalist had characterized the delegate’s

¹²¹ I hasten to add that it was an international lawyer, but not an international environmental lawyer, who characterized my statement in this way.

¹²² Michael Ignatieff, *The Rights Revolution* 134 (2000).

¹²³ Adam Rogers, *The Earth Summit: A Planetary Reckoning* 193 (1993).

response as “unhelpful.”¹²⁴ The very fact that it could be perceived in such fundamentally different ways is quite telling. One begins to wonder whether there is any common ground at all.

The problem, of course, is that while we may not “inhabit the same historical reality,” we do inhabit the same planet. We have no possibility of escaping from each other, no way of avoiding the problems that we share. The hope expressed thirty years ago in the Founex report, that “an emerging understanding of the indivisibility of the earth’s natural systems on the part of the rich nations could help strengthen the vision of a human family” has yet to be fulfilled, but seems to be more pressing than ever.

To span this perceptual chasm is clearly a much more difficult task than simply acknowledging one’s own perspectives and prejudices. An essential starting point is that scholars, activists, and practitioners *within* the discipline ask the types of questions that the Southern approach to international environmental law demands. And so I can only hope that this article will be read not as a denunciation but as a plea; not only for understanding, which is relatively painless, but also for a rethinking of how the discipline and those of us who research, teach, and work within it fit into a broader South–North context. Far from painless, this exercise is likely to be difficult and perhaps even distressing. However, it is one that the discipline desperately needs and from which it can only benefit.

¹²⁴ Quoted in Ranee K.L. Panjabi, *The Earth Summit at Rio: Politics, Economics and the Environment* 31 (1997).



Scheduled Tribes Bill, 2005

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irrational medicines in India and (2) the pervasive corruption in the FDA and Drug Commissioner offices. [42]

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Notes

- 1 For more on this see: Anurag Bhargava, 'Price Control Policy and Public Health: Irrelevance and Danger of Applying only Economic Criteria' in *Impoverishing the Poor: Pharmaceuticals and Drug Pricing in India*. LOCOST/JSS. Vadodara/Bilaspur, India, 2004. Also Chapter 1 'Missing the Woods for the Trees'.
- 2 Quoted from: "The Strategic Approach", Executive Summary of the Report.
- 3 For a discussion on the percentage differences between TNMSC prices and retail market prices, see: S Srinivasan, 'How Many Aspirins to the Rupee? Runaway Drug Prices', *Economic and Political Weekly*, February 27-March 5, 1999.
- 4 See also: P V Rataboli, A Garg, 'Confusing Brand Names: Nightmare of Medical Profession', *J Postgrad Med* 2005;51:13-16.
- 5 See 'Right Brands, Wrong Medicines: Dietary Salt Dispensed in Place of Epilepsy Drug', edit in *MIMS India*, April 2004.

Scheduled Tribes Bill, 2005

Conservation is believed to be most effective when people, who depend on a particular resource, are made partners in managing that resource. Instances have favourably recorded the involvement of local people in forests or wildlife after they were accorded a stake in the protection or propagation of the same. The scheduled tribes bill, being currently debated by the government, promises to be the first step in laying the foundation for a more democratic management of forests, essential for both forests and forest communities to survive.

INDRA MUNSHI

Large-scale eviction of tribals from "encroachments" on forest lands during May 2002 and 2004, and the widespread protests that followed form the backdrop against which the Scheduled Tribes and Forest-Dwellers (Recognition of Forest Rights) Bill, 2005, was conceived. In January 2005, the prime minister decided that a bill granting forest rights to tribals should be drafted and tabled in Parliament. The task of drafting it was assigned to the ministry of tribal affairs (MoTA). Significantly, the director-general of forests was a member of the technical support group (TSG), which was constituted by MoTA to help in the drafting of the bill along with representatives of other ministries. The draft bill has, however, generated a great deal of debate and disagreement between environmentalists, wildlife conservationists, foresters, social activists and other concerned citizens, as a result of which it has been withheld (and currently in the process of revision). The supporters and the opponents of the bill have argued passionately for or against it. Some important issues have emerged which

require critical assessment and serious consideration.

Objections to the Bill

The most contentious clause in the draft bill concerns forest land – 2.5 hectares of which is proposed to be given to each tribal family occupying forest land before October 25, 1980. This, critics fear, could result in fresh encroachments, loss of forest, and more important, "passing" of these lands into the hands of the land and timber mafia who are known to exploit the ignorance and vulnerability of the tribals. It is seen as a "clear invitation to disaster". Besides, it is argued, the demand to bring forward the cut-off date (for conferring of land rights) will continue to be made until much of the forests are gone. The right to allot this land, which is to be registered jointly in the name of a male member of the family and his spouse, is given to the gram sabha of the village concerned. It is pointed out that gram sabhas are often driven by political rather than conservationist considerations and cannot, therefore, be trusted with such an important task. Activists also observe that it would be impossible to implement the bill

in non-scheduled areas, or even in scheduled areas where the gram sabha has not been constituted properly or not formed at all.

The ministry of environment and forest (MoEF) has questioned the very necessity of the bill. Although it recognises the traditional rights of tribals over their "ancestral heritage", it finds the provisions of the bill totally unacceptable. The ministry points out:

...giving the power of settlements of claims to gram sabhas/subdivisional committees/district committees will result in local vested interests taking over, fresh encroachments coming up and the situation going out of hand. The draft bill envisages distribution of 2.5 ha of forest land to each nuclear family. This would be against the goal of the National Forest Policy of 1988 that looks at getting one-third of the country under forest.

Arguing against the bill from another angle, the ministry notes that failure on the development and welfare fronts cannot be compensated by distributing the natural resource base of the country as the bill proposes to do. Wildlife experts/activists fear that access to the forest would harm wildlife, which is already under threat from urbanisation and deforestation. Conservationists call it a sell-out to vote-bank politics.

The Tribals' Cause

At the outset, it is heartening to note that the bill recognises the "historical injustice" done to tribals by the governments, both colonial and post-independence, and their respective forest policies which denied them rights to the forest, excluded them from its management, and over-exploited the forests for commercial gains. One may not agree with all the provisions of the bill, but there is no denying that governments and societies must not only feel collective responsibility for injustice done to communities (castes or any other groups) but also attempt to atone for it in concrete ways. The bill must be supported as a significant step in the direction of establishing tribal rights in the forest within the larger perspective of greater involvement of all forest communities in the management, protection and regeneration of forests.

With respect to land, it must be clarified, the bill vests rights to forest land and forest produce only to those tribals who have occupied these lands before October 25,

1980. The 2.5 ha to be permitted to each nuclear family is only for livelihood and not for commercial purposes, in heritable but not transferable or alienable. It is important to note that in almost all cases, forest lands were taken over by the tribals to meet subsistence needs, and that they were already degraded before they occupied them. They have had de facto control over them, the bill will grant them de jure control, so they are spared the harassment and extortions by forest personnel and can carry on their livelihood with dignity.

With respect to the role of the gram sabha, it is not inconceivable that under pressure from economically and politically dominant factions and individuals, the gram sabha too may engage in irregularities. But given the fact that most tribals do not possess any officially acceptable "proof" or "evidence" of their occupancy, the gram sabha is best suited to initiate action for determining and recording the rights to be accorded to the tribals. This is to be done in open meetings so as to ensure transparency and accountability and this doubtlessly, is a far more efficient and democratic way of functioning than channelling it through the bureaucracy.

Besides, the decisions of the gram sabha are not final, but subject to examination and approval in turn by subdivisional and district level committees. They have the authority to hear appeals against the gram sabha decisions and resolve intra- and inter-village conflicts. The record of recognised rights submitted by the district level committee is further scrutinised (through random checks) by the state level monitoring committee which would then submit its report to the nodal agency. This seems like an adequate safeguard enough.

Two fundamental issues raised by the debate, which underlie the positions taken by environmentalists, wildlife experts, activists and concerned citizens, relate to issues of forest and wildlife conservation and those of tribal rights to the forest. There are many assumptions which require close examination.

Our understanding of forest conservation and management in India is rooted in the scientific tradition of German forestry which the British employed to administer forests in India. The Germans were pioneers in scientific forestry and influenced forestry practices in large parts of the world. An important element of forestry in India, as elsewhere in 19th century, involved the almost complete exclusion of local people,

who depended on the forest for their livelihood, from all aspects of management, which then became the responsibility of the forest department. Apart from serving the revenue interests of the colonial state, the department was to protect and propagate the forests, primarily the commercially valuable species in it, in the best scientific tradition by foresters who alone could be trusted with the business of forest management. With military personnel at its command, the forest department carried out the protection of forests effectively, excluding the forest communities who had drawn sustenance from the forest for centuries. Everywhere the department came to be known as the department of "zulum" while more and more people were convicted for forest crimes. A large number of struggles by forest communities against the curtailment of their rights by the department continued to occur during the colonial period.

Debating Guardianship

After independence this trend continued as the forest department assumed more and more powers to manage forests for economic and ecological reasons. The forest communities have been perceived as thieves and it is believed that forests have to be protected from them. It is important to recognise that this attitude is deeply embedded in the psyche of the foresters, trained as they are in modern forestry, and in official consciousness that considers forests safe only with the presence of trained forest experts.

In India, the material reality does not, however, vindicate the claims of forest department and forestry experts. Besides converting mixed natural forests into plantations, everywhere in India there is evidence of over-exploitation, neglect and denudation of forests. Taking the forests of Thane district in Maharashtra, with which I am familiar, as a case in point, there is evidence to suggest that mixed forests have been destroyed and not even good teak plantations have replaced them. A preliminary draft proposal for the revision of the working plan in one division, a confidential document, reads as follows, "...entire emphasis during the period of the plan, has been on 'felling', i.e., exploitation of best material available, and the prescriptions which embodied the care and protective operations have been ignored. ... The dream of converting the existing miscellaneous type of forests into valuable teak forest

with the expectation of increasing the value of (the) forest by about 50 per cent has remained an illusion". This is true for large parts of the forests in the country.

While the department continues to blame the forest communities for the destruction of forests, it is well established by now that it is the unholy nexus between timber traders, forest officials and politicians that has caused the depletion of the forest resources in India. If at all, the local people are the lowest link in this chain. When scientific interest is subordinated to short-term economic and political gains the results are dangerous. Nevertheless, the fact remains that the outlook which regards forest department as the sole guardians and managers of the forests continues to dominate modern forestry practice, although it is being increasingly challenged.

And this brings me to the role and rights of forest communities in the use and management of forests. Activists tend to imbue forest communities with a heightened ecological consciousness, using it as an argument for demanding greater forest rights for them. While there is some truth in the fact that those who are close to nature and depend on it for their survival do develop a culture of beliefs, myths, practices, symbols, systems of management and use as well as knowledge systems which regulates and guides their interaction with nature, there is a danger in this kind of essentialising. Because as we know, behaviour and values are liable to change when material conditions undergo change. For example, as a result of several factors, especially commercialisation of forests, the bond between the forest communities and forests has weakened substantially.

In a volume published recently *Globalisation and Indigenous Peoples in Asia*, edited by Dev Nathan, Govind Kelkar and Pierre Walter, studies from Nepal, India, China, show that apart from the fact that the tribals have a special feeling for nature around them, what really makes them protect their forests and rivers is the fact that such resources provide livelihood and sustenance to them. The "critical capital" is protected by the people from predators, both outsiders and insiders. Combined with this is the fear of punitive action by the local and higher level administrative bodies in case of violation of rules. Experiences from Nepal and China have shown, that long-term leases of forest land to the poorest tribal families along with other

forms of assistance results in generating income for the families, protection of the natural resource, the overall development of other sectors and the region as the effects multiply. In such a situation privatisation serves the purpose of ensuring non-market access to productive resources to the poorest households. Referring to Nepal's successful experiment with "leasehold forestry", the authors argue that the results have been most encouraging. Forests have improved, both in terms of density and species diversities, people's incomes have gone up with substantial involvement of women in various activities related to leasehold forestry. In India, too, we have examples of successful protection and regeneration of forests by local communities when they can derive some benefit from it.

The general point being made is that recognition and establishment of property rights over lands already "encroached" upon by tribal families, within controls, can be an effective way to create livelihoods for a large number of some of the poorest people in the country who otherwise have few options available to them. The argument of the MoEF that failure on welfare and development fronts cannot be

compensated by distributing natural resource base of the country, can be turned around to say that what is needed for development, in the broadest sense, is not welfare but a more effective management of resources for creation of income and employment for the most marginalised. In underdeveloped countries like ours, conservation can succeed, not by excluding the local people by force, but by giving them a stake in preserving their environment and resources. As Lutz Faehser, a German forester experimenting with nature-oriented forestry in Germany observes, good ecology can be combined with good economics, and I would suggest, good development.

Protecting Forests

As far as protection of forests from land and timber mafia is concerned, it is unfair and unrealistic to expect the most vulnerable section of our population to do what the gargantuan forest department has failed to do. At the local level, several agencies including the forest department, gram sabha, villagers, and voluntary organisations working in the area, can be

involved to check the abuse and misuse of forests. Considering the forests have also to be protected from the forest department, the forest communities can play an important role in checking tendencies like conversion of natural forests into commercially valuable plantations, over-exploitation, as well as theft by insiders and outsiders.

Finally, I wish to make the following point with respect to the millions of tribals, dalits and forest people who continue to turn to the forest for a variety of subsistence needs. Given that conditions of chronic poverty and hunger are endemic to most tribal areas and that a majority of them work in extremely unsafe and insecure occupations for below subsistence wages, which are often not paid, it is hardly surprising that they steal from the forest, or assist the trader and poacher to do so to earn a few extra hundred rupees. It is important to recognise that protection of forests and wildlife is closely linked to the livelihood situation of tribals and the other rural poor. Since forests are an important resource in rural India, it can be used for generating more employment and income for forest communities, whose knowledge

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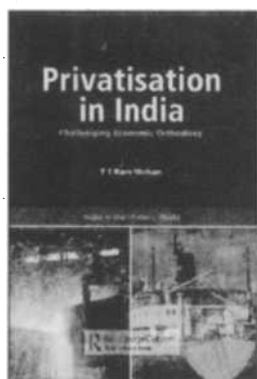
T T Ram Mohan

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and skills should be utilised not merely as labourers for felling trees and clearing the forest but for more productive functions. As a rule, forest communities must be given rights and responsibilities in different kinds of forest-related activities such as the protection and regeneration of forests or the processing and marketing of forest produce. These can be worked out jointly by the departments of forest and tribal welfare, experts, voluntary organisations, local people, taking into consideration regional particularities and cultural specificities. Their skills can be updated so as to combine scientific knowledge with traditional knowledge and wisdom to ensure the efficient management of forests.

In countries like ours, except in very special cases, conservation can be carried out effectively only when people, who depend on a particular resource, are made partners in the management of that resource. There are innumerable instances where the behaviour of local people towards forests or wildlife has undergone radical transformation when they are given a stake in the protection and propagation of the same. The more sensitive among the forest and wildlife officials realise that the local people have to be taken into confidence if conservation is to succeed. For example, commenting on the declining tiger population in Chandrapur, Gadchiroli and Gondia in Maharashtra, Dilip Gode, member of the state wildlife advisory board and secretary of Vidarbha Nature Conservation Society, suggests that locals who are helping poachers should be motivated towards conservation. "They (both Naxals and locals) should realise that humans and wildlife have coexisted for centuries so there must be a workable solution," he observes. Forest officials admit that tribals help poachers for quick money because they are very poor. Long-term economic interest can and does become a strong motivation for protection of resources. But this requires a commitment to the welfare of nature as well as people, which is sadly lacking among those who are entrusted with the fate of both. Everywhere in the world people are demanding greater participation in matters of governance, the bill can be the first step in laying the foundation for a more democratic management of forests, without which neither the forests nor the forest communities will survive. [27]

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Case for a Bus Rapid Transit System in Mumbai

A Bus Rapid Transit System (BRTS) for Mumbai along the five north-south and three east-west trunk routes is the most economical way of alleviating the daily problems of congestion and severe overcrowding in commuting to work. The Mumbai Metro Master Plan should be kept in abeyance until a BRTS has been put in place.

SUDHIR P BADAMI

In the current scenario it is road congestion that is the cause of low speeds, high fuel consumption and passenger discomfort in the bus transport service in Mumbai. This note delves into aspects of how road congestion can be reduced, which in turn will also reduce the commuter 'super crush' load in the suburban railways at a fraction of the cost and time compared to the proposed Mumbai Metro Master Plan (MMMP).

Mumbai Metropolitan Region (MMR) comprises of six municipal corporations, 13 municipal councils and about 1,000 villages. Although from the point of view of future development, the entire MMR must be taken into consideration, the current problems of the city of Mumbai under the jurisdiction of Municipal Corporation of Greater Mumbai (MCGM) need to be addressed more urgently. Therefore, without touching upon the other five municipal corporations and 13 municipal councils, it would be appropriate to focus on the MMR as a whole. While the population of the MCGM is 119 lakh, the populations of other five Municipal Corporations are Thane (13 lakh), Kalyan-Dombivili (13 lakh), Navi Mumbai (7 lakh), Mira-Bhayandar (5 lakh), Ulhasnagar (5 lakh) and Bhiwandi-Nizampur (6 lakh). All the figures are according to 2001 Census reports. While TMC, KDMC, NMMC, MBMC and UNMC areas are linked to the main suburban railway serving MCGM, the BNMC area is connected to Mumbai only by road although it does lie on the Vasai-Diva line. The Navi Mumbai areas are now networked reasonably well and also connected to Thane.

Need to Augment Commuting Capacity

There are more than 60 lakh commuters who use the suburban railway system

twice a day and there are 45 lakh bus trips made each day. Only 25 per cent of these travellers commute by bus independent of railway commuting. Users of public transport constitute 88 per cent of Mumbai's commuters. The users of intermediate public transport measure up to 5 per cent and the rest (7 per cent) use personal vehicles.

Within the MCGM area, Mumbai is a highly dense city. Population growth in the suburbs is much higher than the almost stagnant island city population. This is more pronounced in the western suburbs even though the eastern suburbs are not too far behind. However, the average density of the island city (458 persons per ha) is much higher than suburban Mumbai (western suburbs – 221 p/ha, eastern suburbs – 208 p/ha). Mumbai's main employment location is in the southern end which is the destination for nearly 20 lakh commuters. Even as IT centres along the Andheri-Ghatkopar line in the suburbs have been expanding of late, Bandra-Kurla complex has been developing as a financial services centre more recently. However, the bulk of commuting still occurs to and from south Mumbai. The central Mumbai areas of Parel in the island city, the locations of erstwhile textile mills, are now emerging as centres of residence and commercial establishments. In the overall development of the region, central Mumbai gets linked to the mainland at Nhava by the Mumbai trans-harbour link starting at Sewri.

The current position of commuting railway is as follows: Peak time commuting extends to nearly four hours in the morning and four hours in the evening and the coaches carry between 450 to 500 people each at 'super crush load' while they should be carrying only about 200 commuters at crush load. Therefore, there is a considerable need to augment the capacity of north-south commuting.



ADIVASI LIFE STORIES

Context, Constraints, Choices

INDRA MUNSHI



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I

Colonial Regulations and Collective Resistance

Early Years

In the early nineteenth century Thana was one of the most heavily forested districts in Bombay Presidency [Gazetteer 1882: 1-3]. Some of the early reports testify to this fact. The descriptions of Captain Dickenson in his reports on the inland parts of this collectorate show that "at the end of the Peshwa's rule the whole country was lying waste and unpopulated. That upto about 1850 wasteland was everywhere so abundant as to create a feeling of despair about the future of the district, that the increase of cultivation was so much desired that the poorest people were allowed to cut down as many trees as they liked merely for the purpose of clearing the land, and that wood itself was so abundant that everyone cut where and as he liked" [BFC Vol 1, 1887: 21].

Before the British took over the district in 1818, the adivasis – the Kolis, Bhils, Katkaris, Thakurs, Warlis and others – were dependent almost entirely on the forests for their survival. They practised 'dalhi' or shifting cultivation by burning down the trees, prepare the ground by crude methods, and after the crop was raised, abandoning the patch and taking up another by paying eight annas per acre. The same spot was seldom used before seven years had elapsed. For part of the year the adivasis lived on fruits, roots, berries, small game, etc. They managed to survive by raising a meagre crop, by sale or barter of forest produce and by occasional plunder of the more prosperous villages in the plains. The non-adivasi small cultivators, too, depended on forests for

their agricultural and domestic requirements like timber, fuel and grazing.

During the second half of the century, the forests were depleted severely as a result of the demand for timber by the Royal Navy, the expansion of railways and the growth of urban centres close to Thana, particularly Bombay. In the absence of a system of supervision over the felling of trees, merchants exploited forests in the most reckless and wasteful manner [ibid: 24]. In 1841 Dr. Gibson, superintendent of the botanical gardens, made an inspection of the forest tracts of north Konkan and confirmed the alarming state of the forests. Colonel Jervis, the chief engineer at Bombay and a member of the military board, noted in 1843 that in large parts of Thana the teak forests had been destroyed and that only stumps and shoots were left behind [Stebbing Vol 1 1922: 114-14]. Although the reports were probably exaggerated with a view to emphasising the need for conservation, there was obviously some truth in them.

As part of their forest conservation policy, the British embarked on the programme of settling the "wild tribes" who numbered 380,000, or 45 per cent of the total population of Thana in 1872 [Gazetteer op. cit.: 60], in order to bring more land under cultivation and open out an additional source of revenue. Special incentives were provided, in terms of lower assessment, to the adivasis to give up 'dalhi', which was considered "wasteful", and to take up settled agriculture.

Several regulations were introduced between 1847 and 1862 to restrict the rights of cultivators and commercial interests, the merchants and contractors. From time to time, both the cultivators and the traders made numerous complaints against the restrictions [BFC Vol 1 op. cit.: 27]. As a result of Gibson's vigorous campaigns against the "destruction" caused by dalhi, it was greatly reduced in the district by the 1860s [Stebbing Vol 1, op. cit.: 220]. The preservation of the existing forests became the *raison d'être* of the forest department. A detailed survey of forest lands was carried out at the initiative of N.A. Dalzell, the chief conservator from 1860-69.

As years passed, the policy of conservation was pursued zealously by the government and its officers. With the object of facilitating production of timber on a sustainable basis, for both

revenue and imperial purposes, it was found expedient to pass a law, "to abolish all rights of the people and make government the only master" [BFC Vol IV 1887: 36]. The legal machinery was set into motion and the all-encompassing Forest Act VII of 1878 passed.

Restrictions of Customary Rights

Tensions between the forest department and the cultivators had been building up since the 1860s, but the conflict became sharper after 1882 when the provisions of the forest law of 1878 were enforced. The needs of the people came into conflict with the interests of the forest department. Under the provisions of the act, the division of government-held forests into "reserved" and "protected" was further systematised. In reserved forests the government held full rights of ownership and the produce were not to be used without official permission. Protected forests were also owned by the government, but had not yet been systematically surveyed with respect to the nature of the vegetation or that of the user's rights [Tucker 1979: 282]. Special forest boundary marks were erected to facilitate the "detection and punishment of forest crimes" [F. ADM. R 1887: 43]. Rules of conservancy were more strictly applied than ever before [RD, 104 1885: 207]. Above all, vast areas of unoccupied or wasteland, on which the villagers had previously depended to a large extent for firewood and farm implements, and for free lopping of 'rab' and cultivation by burning the seed bed, were incorporated in the reserved forests and administered by the forest department. The feeling among district revenue officials was that "there is too much taken up for forests and is scarcely enough left for cultivation" [RD, 138 1884: 118].

The hardships caused by the restrictions put on the collection of wood and on the use of grazing lands as well as the harassment caused by the forest subordinates, resulted in widespread discontent. The law was particularly harsh on the inhabitants of the non-forest villages. Both big landowners and small cultivators were distressed over the new arrangements. In their struggle against the forest department the former made common cause with the adivasi and non-adivasi cultivators, whose legitimate rights were seen as having been curtailed by the department in its

pursuit of profits. The simmering discontent among the inhabitants acquired alarming proportions. Two organisations, the Thana Forest Association, which had some of the leading landholders of the district as its members, and the Poona Sarvajanik Sabha, a leading nationalist organisation, campaigned to have the forest laws amended and to repeal the repressive measures applied against the violators of the law. The matter got a lot of publicity in the local press. In 1885, a deputation consisting of influential persons from Thana and Kalyan, and eminent personalities like Kashinath Trimabak¹ Telang, Dadabhai Naoroji, P.M. Mehta and others met Lord Reay, governor of Bombay, to acquaint him with the hardships caused by the act. The government was forced to appoint a special commission, the Bombay Forest Inquiry Commission, to study the situation in Thana and Kolaba districts [RD, 105 A 1885: 3]. The commission submitted its voluminous report in 1887.

Not only the dalhi system of cultivation, but all rights to the forest were progressively restricted with little regard for the prevailing custom. The commission reported that,

...upto the year 1847 or thereabouts, the people of this zilla have been in the habit as of right of bringing, cutting, removing, and using for any purpose whatever teak or any trees of any kind whatever unrestrictedly, uninterruptedly and peaceably from generation to generation, and that the unlimited exercise of this right of custom has never been upto then challenged. ... That the grazing, fuel and agricultural domestic and ordinary casual trading rights of the people over the jungles had never been seriously questioned until the time of the Forest Act which put a wholesale restriction on all of them and all of a sudden [BFC Vol 1V op cit: 36-37].

The commission observed that the governments which preceded the British had appropriated certain parts of the forest for imperial purposes and regulated cutting of trees by local residents in others. At the same time, the inhabitants were allowed to take all the produce they required for domestic and agricultural purposes from the public forests without hindrance [BFC Vol I op. cit.: 20-21].

But now elaborate rules specifying the nature of rights and the parts of the forest in which they could be exercised were introduced. While some parts of the forest were closed for the regeneration of "valuable" species, especially teak, grazing and collection of timber and other forest produce were permitted in the open portions of the forest. But the cultivator had to obtain a pass by paying a fee and then collect what he required from the forests. For this he would have to subject himself to the "whims and caprices of not less than half a dozen officers", to follow their strict injunctions, to follow a certain route for the removal of the material, to answer innumerable questions of a policeman whom he may chance to meet, and to do all this within the prescribed time limit [BFC Vol IV op. cit.: 41].

The prohibition on moving and taking forest produce without a "pass", the commission observed,

... has come to many of these persons in the light of a death warrant and has practically placed the whole population of the hills at the mercy of the forest subordinates who have not scrupled to use their power in the most cruel and oppressive manner [ibid: 42].

Factors such as lack of clarity even among the forest officials with regard to the nature of "privileges" in the government forests [RD 97, 1891: 59] and frequent modifications of forest regulations increased the vulnerability of the poor.

The commission was very forthright in its criticism of the government for deriving revenue from wholly "illegitimate" and "improper" sources such as taxation, by means of fees, of the poorest classes and the sale by contract of a vast amount of grass and forest produce required for agricultural purposes. These prohibitions necessitated closer vigilance and forest officers often acted strictly. Prosecutions increased in number and the forest staff became little more than police officers [BFC Vol I op. cit.: 37]. A great deal of harassment of cultivators resulted from the fact that lands adjoining cultivated fields, or even situated in the heart of the villages, were reserved. They found it impossible to keep cattle away from the reserves, "which served as traps", for as soon as cattle entered them, they were impounded [RD, 96 1897: 37].

Major Grievances

The special grievances of the adivasi groups were insufficiency of 'shindad' tree-covered land, and land for tillage, the restrictions on removal of fuel, the prohibitions against cutting wood for building huts and cattle sheds and for agricultural implements, the reservation of mahua flowers and fruit, apta and tembhurni leaves, the restriction against cutting of bamboos, prohibition of dalhi, and insufficient supply of dry wood [BFC Vol II, 1887: 43].

One of the main grievances of the adivasis of the district was that dalhi had been prohibited. A number of petitions asking for permission to practise dalhi were submitted. For example, a petition to the revenue commissioner signed by the Thakurs, dated May 8, 1873 represented the plight of the adivasis:

Wherever there may be some little ground on the hills, we prepare the same by sowing and burning it and thus cultivate the dalhis and maintain ourselves on the crops of nachni and vari that may be raised there. If we were to grow corn (that is impractical, since) it required a good ground and whence can we poor people get such ground? There is no hope at all of our getting it But now we have been prevented, we come to know that government has included our land for cultivating dalhis, within the forest limits. In short we are poor people. We maintain ourselves in the jungle by feeding on such things as roots. But we certainly cannot live, and shall die, if we are not allowed to cultivate dalhis. This (we pray) may be considered [RD, 105A 1885: 125-127].

Grazing

One of the complaints of the people of Thana was that the inclusion of wastelands in the reserved and protected forests in 1879 had seriously affected their existing grazing arrangements.

During the course of the demarcation of forest lands, which was carried on from time to time between the introduction of the survey and the passing of the Forest Act of 1878, some free grazing areas were included in imperial resources and removed from the list of free grazing lands. The curtailment did not, the commission observed, cause much inconvenience or provoke complaint. The action taken in 1879 as regards the inclusion of

grazing lands into reserved and protected forests was, in contrast, a matter of serious concern for the population of Thana.

Under the Forest Act, out of the 470,790 acres included in the forest villages, 401,566 acres or nearly 85 per cent were notified as reserved and protected forests. The area of the free grazing land thus included in forests of one or other description, viz., 401,566 acres, amounted to about 50 per cent of the total forest area of the district [BFC Vol I op. cit.: 32]. The new rules, it was observed, brought upon them a great hardship and reduced greatly the number of their cattle for want of pasture, thus preventing them from cultivating the ground [RD, 105 1887: 382].

The effect of the notification of the reserve gave the forest officers the right to prohibit free grazing. They often acted strictly, displaying very little tact. The two main complaints were: (1) large areas of the old free pasture had been wrongly included within forest limits and (2) the inhabitants of villages, having no forest within their limits, were no longer allowed to graze their cattle free, according to former custom, in the pasture lands of other villages [BFC Vol I op. cit.: 37]. The people of the so-called non-forest villages were particularly hard hit by the regulation.

The commission suggested that if the government conceded free grazing as a privilege, it should prescribe the limits within which it could be enjoyed considering both the area and the number and kind of cattle. However, at the time, it maintained, to restrict the number of cattle to be admitted for free grazing in the forest was unnecessary and inexpedient. For the total number of cattle, 306,040, kept by the residents of Thana, was not more than what was required for the proper cultivation of the area annually cropped.

This brings us to the issue of 'rab', which, as we notice, was closely related to the problem of grazing.

Rab

In local usage rab denoted cultivation by burning. An important feature of Konkan agriculture, rab was practised for cultivation of paddy as well as dry grains like nagli and varai. A seedbed would be prepared in March or April by burning layers of cowdung, tree loppings or 'tahal', shrubs, leaves, grass and clay earlier spread over it in different combinations. Clay was used to prevent the

wind from blowing the ashes away. When the rains came in early June, the seed was sown and the seedbed ploughed lightly and harrowed. After an interval of 18 to 30 days the seedlings would be transplanted in the field.

The practice was a major source of friction between the people and the forest officials, who considered it "unnecessary", "wasteful", "unjustifiable" and an obstacle to forest conservancy. It was on the issue of the use of *tahal* that the forest department was most vociferous. The agricultural experts, however, asserted their views on the usefulness of *rab* in Konkan, given, one, the peculiarity of rain on the western coast, its intensity and continuity in early monsoon and its early cessation; and two, lack of water storage facilities in the Konkan. After carrying out experiments with other methods of cultivation, E.C. Ozonne, director of agriculture, concluded that *rab* greatly increased the yield, that "...the raiyat in *rab* areas was adopting the only ready means by which he could cultivate his rice crop with profit", and that "... in Thana loppings are absolutely necessary, because other *rab* material is not sufficient to meet the demand for rice, *nagli* and *varai*" [BCF Vol I, op. cit.: 221-236].

Before the introduction of the revenue survey in Thana, all the 'varkas', grasslands, except those reserved as state forests by former governments, were communal wastes. From time to time, portions of the communal wastes were appropriated for supplying loppings of trees and brushwood for *rab*. These were called *shindad* lands and were generally attached to particular rice fields. Other portions were utilised either for cultivation of hill grains, or for supplying grass required for *rab* and cattle. The remaining part served as common pastureland. However, assessment was levied only on the actual areas of the *varkas* land which was converted into separate occupancies transferable at the will of the occupant, with or without the rice land to which they were formerly attached. While some cultivators retained the *shindad* lands, many lost them. Consequently, the supply of *rab* material was greatly diminished [ibid: 101]. The senior forest officers attributed this to the reckless cutting of trees for sale by the 'raiya', cultivator [for details see Munshi 1990: 439]. In all respects, the demand for *rab* kept increasing while the supply area was constantly decreasing.

The condition of government wastelands outside reserved forests was even worse than that of occupied lands given that there was no owner to check the reckless cutting of tahal and that there was more demand on resources than on occupied lands. The people made no attempt to preserve the trees on wastelands and cut them recklessly for tahal and fuel. According to the settlement officer, they felt certain that the lands would be taken into the forest after the demarcation was completed. In all the unsettled talukas, people cut trees recklessly in protected forests which, they feared, would sooner rather than later be made reserved forests. An additional factor, it was pointed out, to be considered in view of the growing scarcity of tahal supply, was the scarcity of firewood. Owing to the restrictions on the removal of firewood from the forest, the people had to fall back upon the trees kept for tahal [TWC, 1904: 13].

A very serious consequence of the inadequate supply of tahal was that even cultivable land could not be cultivated. The general rule was to cultivate as much as the cultivator could find rab material for [Note 1897: 11]. An important issue, which had a bearing on the decline in the supply of rab material, was highlighted by J.P. Orr, the forest settlement officer of Thana, in a communication to the collector of Thana in 1895. He emphasised the need to clear the teak trees (which the people may not touch) from the occupied as well as the government wastelands to stop the 'injaili' trees from being totally smothered. Preservation of injaili trees to which people turned for tahal and fuel was, therefore, urgently required. He suggested that for the propagation of injaili, both occupied and wastelands should be cleared of teak. Needless to mention that for its commercial value, teak was treated as a privileged species under the colonial rule, as it is at present.

Agricultural Implements

Agricultural implements used by the cultivators in the region were the plough, the 'alwat' used for levelling the ground after ploughing, 'tonka' used for the seedbed in the transplanting season, 'ghase', a kind of sledge on which the seedlings are drawn from the seedbed to the area of transplantation and 'baila' or the spear. Apart from teak, timber from the trees such as 'ain', 'khair',

'dhawda' or 'tivas' was also used. None of the implements lasted for more than three years and many had to be replaced after one year. The kind, shape and size of wood required varied for different implements. Whole trees were seldom required so the cultivators selected particular branches. The wood had to be flawless, without cracks or hollows [ibid: 12-13]. Through long years of experience, the cultivator acquired the necessary knowledge which was passed down from generation to generation.

By the government resolution of 1863, free grant of timber was allowed (within a limit to be fixed by the revenue commissioner) for agricultural implements, but only if the collector considered the circumstances of the applicant reasonable [BFC Vol I op. cit.: 109]. Alternately, the applicant was allowed a permit or a pass to cut such trees as might have been marked for cutting. The forest establishments were to ensure that the privilege was not misused. No important changes were made until 1880 when the whole question was reconsidered. The government then decided that free wood should not be granted in any circumstances for any purpose, without its prior sanction [ibid: 110].

The cultivator could obtain a "pass" by paying a fee and then proceed to the forest to collect what he required. For this, he would have to follow the strict orders of the forest officers and face harassment by the policemen. Or else, he could go to the depot, pay the price and get the supply ready-made. The cultivator was subjected to a great deal of trouble owing to the inconvenient location of the depots, non-availability of the required produce and restrictions and limitations on certain classes of wood and other forest produce. Above all, he had to pay rather than take what he needed [ibid: 41]. The large and impoverished population was practically compelled to buy from the government all the wood required to satisfy their innumerable needs.

An important matter, which aggravated the situation, was that teak, the most useful wood for agricultural implements, was kept out of reach of the cultivators. It could not be touched, not even when it grew on the rayat's 'malki' land or on the government's wasteland. The adivasis had been so affected by the

stringent rules that they were on the verge of starvation. The commission reported:

They have hitherto looked at the hills and jungles as their sole resource and means of subsistence. The prohibition contained in the rules against moving and taking forest produce without a pass has come to many of these persons in the light of a death warrant, and has practically placed the whole population of the hills at the mercy of the Forest subordinates who have not scrupled to use their power in the most cruel and oppressive manner. A large proportion of this vast forest population, numbering about a quarter million of souls in the zilla, is now reduced to the cruel dilemma of perishing by starvation or of appropriating wood and forest produce and being treated and punished as criminals [ibid: 42].

It was this situation that led J.P. Orr to make the suggestion to the collector of Thana, that as teak is largely required for agricultural implements, some provisions ought to be made by which the adivasis may also have it easily available [TWC op. cit.: 19]. For this it was necessary, in his opinion, to mark off a small teak reserve in non-forest woodlands near each hamlet. Once teak was cleared in occupied or wastelands, although the government retained the right over it after growth, the privilege of using it for agricultural purposes, and not for export, could be given to the people [ibid: 19].

Recommendations for the Improvement of Agriculture: J.A. Voelcker

An important voice at the close of the last century, which advocated closer attention of the forest department to agricultural needs, was that of J.A. Voelcker, consulting chemist to the Royal Agricultural Society of England. His recommendations for the improvement of Indian agriculture focused on better management of forests and are relevant even in the present.

Voelcker touched upon the fundamental issue in his comments on the role of the forest department.

When it began to work, its chief duties were the preservation and development of large timber forests such as the teak forests

of Lower Burma, the sal forests of Oudh, and the deodar forests of the Himalayas or the forest of the Western Ghats. Its objects were in no sense agricultural, and its success was gauged mainly by fiscal considerations; the Department was to be a revenue-paying one. Indeed, we may go so far as to say that its interests were opposed to agriculture and its intent was to exclude agriculture rather than to admit it to participation in the benefits [Voelcker 1893: 135].

The necessity of preserving the large forests which supplied Europe with teak, provided timber for building purposes, railway sleeper, furniture, etc, and were a "means of obtaining a large revenue" [ibid: 140] was not questioned. These forests which were mostly on the hills and mountain ranges, far removed from the general areas of cultivation, were, in Voelcker's view, rightly included in the reserved forests. But the reserved forests near the cultivated areas, which could be made to serve agriculture, were also being diverted from this end. As it happened, he noted, in most instances the agricultural population did not see the reservation of a forest and their exclusion from it as providing any benefit to them. This was so because the department was guided by the principle of growing only large timber for sale, and deriving huge revenue from doing so. As a result, even those areas which were not suited for timber, but only for scrub and grazing, were taken up to grow timber [ibid: 143].

With specific reference to Bombay presidency, he pointed out that the rab system could be the most useful aid to agriculture and that the growing of trees which could be pollarded would do much more good than supplying timber. He reported seeing in Mahim, Bombay, cultivators lopping the trees around their own fields, the twigs and leaves being utilised either for rab or directly as manure for rice fields. Yet the trees were not ruthlessly destroyed, for they were lopped only once in four years. Since in wet regions the rab system had been proved to be the best for rice cultivation, "it would frequently be very legitimate for the forest department to work for the supply of rab instead of timber" [ibid: 144-145].

Voelcker did not mince words when he suggested that there were other ends, which the forest department should serve,

besides growing timber and reaping huge revenue out of the forests. And, these were to provide for the agricultural community primarily, the facilities for obtaining what they required, viz, small timber, wood for implements, firewood, leaves, grass, or, wherever possible, grazing.

It was clear to him that the only way to increase the supply of wood to agriculture was the creation of new enclosures of land for growing wood, scrub, jungle and grass. Voelcker convincingly argued for the creation of fresh reserves on available land: for example, the wastelands belonging to the government, the wastelands of villages, ravines, banks of canals and railway lines and certain types of lands under dry cultivation which might better be developed as reserves. He found it absolutely essential, in addition, to institute an agricultural enquiry to ascertain the requirements of each district in respect of wood, etc. A portion of the forest revenue could be set aside for the extension of reserves to meet agricultural needs. The results, Voelcker emphasised, "must not be gauged by financial considerations alone, but by the benefits conferred on the agricultural population, the keeping up of soil's fertility and the maintaining of the land revenue to the state" [ibid: 157-168]. In one word, the agricultural needs come before, not after, commercial and revenue requirements for the forest department.

In reality, however, the cultivators were truly "reduced to despair". In forest villages and even more so in non-forest villages, they were hard-pressed to meet the requirements of agriculture, grazing, timber for agricultural implements, material for rab and a large number of other forest produce for domestic needs. Moreover, they were exposed to the tyranny of petty forest officials as well as elaborate bureaucratic procedures which were beyond their comprehension. Even by the 1880s, a number of adivasis had lost their lands and become tenants and labourers to moneylenders and big landholders, the Marwaris and Gujarati Vanis, Parsis, Brahmins and others. The majority of them supplemented their meagre income from land or labour, by the sale of forest produce, especially firewood. And, when this "privilege" was withdrawn in 1896, there was an open violent confrontation with the government. But there were other ways, less dramatic

ones, in which the poor routinely resisted forest regulations and sought to reassert their rights to the forest. We will look at these in the following section.

Evasion and Confrontation

The resistance to forest regulations in Thana was marked by a combination of evasion and confrontation. The forest laws established new property rights, making "government the only master" and so challenged the arrangement sanctioned by customary law. Threatened by the new law, the cultivators sought in different ways, to reassert their rights to the forest and its produce. The defiance, at times, took an open and violent form. The 1896 upheaval was one such occasion. But the common form of resistance included unauthorised occupation of land, thefts, bribing and setting fire to the forests through which the poor, especially the *adivasis*, tried to re-establish their rights to traditional means of livelihood, challenging the claims of the government. We do not know what intention guided their resistance, given the lack of direct evidence. It appears to be, as James C. Scott points out while speaking about peasantry in general, "nearly always survival and persistence" [Scott 1990: 301], and as Hobsbawm succinctly puts it, "working the system to its advantage or rather to its minimum disadvantage" [Hobsbawm 1973: 13]. The Thana cultivators, too, were trying to ensure survival in the new system but, in doing so, came into conflict with the state.

Evasion

Non-compliance was an important strategy in the struggle for asserting some control over forest resources, or, in other words, for survival. In the new moral-juridical order these actions were categorised as "crimes" and "offences" punishable by law. The definitions of legal and illegal, right and wrong, fair and unfair, and just and unjust, had got somewhat mixed up and the poor were trying to cope with the confusion.

Forest regulations were evaded in a routine manner and this created major administrative problems. District officials reported an enormous number of cases of unauthorised cultivation of land, amounting to several thousands [RD, 27 1887: 44]. The demand for land was high because of the pressure of the growing

population as well as the transfer of land from small cultivators, especially adivasis, to moneylenders and landholders [RD, 25 1882: 96]. As one official put it, the landless, like the adivasis, "who can't buy the land, steal it" [RD, 34 1884: 125].

People regularly committed theft of wood and other forest produce for agricultural implements, house construction, and sundry other domestic requirements. The strategy was to ignore forest guards and, when that became impossible, to bribe them into connivance. The guards, too, used the opportunity to extract from the helpless peasant in order to supplement their meagre income. The same story was heard everywhere: "For the last three years we have been paying the guard by raising subscriptions among the villagers. I pay six annas a year in three instalments", or "We never pay him anything as we are too poor to pay" [BFC Vol II op. cit.: 73, 34].

The fact that large-scale theft occurred was recognised by district officials, especially revenue officials, who viewed the forest policy with distrust and as detrimental to the interest of agriculture. In 1882 the assistant collector of Thana observed, "In the absence of (such) a low price thefts will still continue and in these wild parts they cannot be found out" [RD, 25 1882: 97]. In 1887, it was pointed out that stealing and cutting was rampant in the forests. Occupied lands intermingled on all sides with forest lands, and the occupants, when felling trees on their own lands, frequently stepped over boundaries and cut timber from government forest lands [RD, 38 1887: 43, 53]. In 1894 also "petty thefts" continued to be reported [RD, 48 1894: 24].

A matter of even greater concern for forest officials was forest fires, which continued to occur frequently in Thana district [RD, 151 1885: 65; RD, 42 1886: 19; RD, 39 1895: 172; RD, 39 1898: 147]. Although there was a reduction in the percentage of forest area burned from 14.6 in 1886-87 to 5.5 in 1892-93, it was still a cause of concern [F Adm R 1887: 55; Adm RFD 1894: 24]. There was a general agreement among officials that the fires were "not always accidental but due to mischievous or still worse motives". The commissioner of northern division, G.F. Sheppard, attributed the large number of forest fires in 1885 to the "irritation" felt by the people at the strict enforcement of forest regulations [RD, 151 1885: 65].

An important reason for firing the forest was believed to be "manufacture of dead wood". Headloads of dead firewood was allowed free to forest villagers for household consumption and to adivasis for both consumption and sale. It had to be made artificially since its natural supply in Thana was inadequate compared to the demand [RD, 138 1887: 55]. Forest fires, it was pointed out, were made to facilitate the finding of dead wood by removing undergrowth, hasten the death and fall of living trees and give the appearance of dead wood to freshly cut timber [Adm RFD 1885: 21]. Forests officials never tired of reporting that dead wood was manufactured wholesale for sale to dealers who set up timber depots at 'bandars', inland ports, and railway stations and persuaded forest villagers, adivasis and others to take it to them. The wood was bought for export, primarily, to Bombay [RD, 42 1886: 19; RD, 25 1891: 74].

The adivasis had long engaged in the sale and barter of firewood and other forest produce in coastal villages and towns. Given the restrictions on dalhi, and the subsequent loss of land, for many of them it was an important source of livelihood. The presence of timber dealers all over the district, ready to buy wood, provided an added incentive to augment the supply of dead wood and other timber by resorting to axe and fire. Besides, district officials often remarked that wood-cutting was a far more congenial employment to adivasis than agricultural labour or road making [RD, 104 1885: 228]. Obviously, by burning forests the adivasis were protecting their livelihood and at the same time giving vent to their resentment against the forest department.

The officials were very much exercised about the damage caused by forest fires. The general feeling was that if the privilege of collection of headloads of firewood for consumption and sale continued, the problem would persist. The forest department's strategy of increasing vigilance and meting out threats of punitive action including withdrawal of privilege was only partially effective in controlling the fires.

Not only forest fires, but the other "crimes", too, continued to occur and, in fact, increased. The figures of forest "offences" reported in the administration reports of the forest department do not, however, convey the magnitude of the phenomenon. A total number of 715 offences were reported in 1878-79, 571 in

1889-90, 1325 in 1892-93 and 1168 in 1898-99 [Adm RFD 1879: 53; F Adm. R 1891: 81; Adm RFD 1894: 57; Adm RFD 1900: 7]. A large number of offences went undetected, much to the despair of forest officials. The possible reasons for this were that the lower-level forest officials were neutralised by the adivasis through bribes and this undermined the efficiency of the forest department. Although some of the crimes were committed individually, bribing was widespread. In a sense, it was even sanctioned by the community as a strategy for survival, an important factor in its persistence over a long period of time.

Confrontation

In a dramatic move the government passed a resolution in 1894 discontinuing the privilege of collecting dead wood in the forests in one taluka. In July 1896, the order was enforced throughout the district. The privileges hitherto granted by the government in the reserved forests to adivasis to collect firewood free for sale and to others on payment of a fee, were withdrawn. Anyone seen fetching loads of firewood from forests after September 1896, was liable to a punishment of imprisonment for maximum six months, or a fine of Rs. 500, or both. The justification offered was that the privilege had been abused, resulting in the injury to the forests, and that the adivasis had "turned a concession into a trade" [RD, 116 1896: 23]. Besides, it was argued, the introduction of the coupe system in the late 1880s had ended the problem of unemployment of the adivasis, who now earned a livelihood labouring on the coupes.

The resolution was the culmination of a process of gradual abolition of people's customary rights to forests. A series of bad seasons, high prices of grains and the general state of poverty had reduced the poor to despair. The new proclamation prohibiting the adivasis from taking headloads and cartloads deprived them of the only means of making a livelihood. Little wonder that "the greatest excitement prevail[ed] throughout the district and that the people of each taluka held mass meetings and memorialised the government to have the obnoxious notification withdrawn" [QJPSS 1896: 15-160]. Thana witnessed much agitation during the following months. Nearly 4000 Kathodis, Thakurs, Katkaris and others were reported to have called upon the collector of

Thana in September and petitioned for a cancellation of the notification.

There were violent confrontations between the deputy collector and the people. The grievances of the people were no longer restricted to the question of firewood. They demanded that the palm-tree tax should be abolished, country liquor sold at one anna per seer, salt at one anna per 'paili', and husked rice at Rs. 1-4 per 'maund', and that the government should redeem the mortgaged lands of the raiyats from the 'sowkar', landlord-moneylender-trader, and restore it to them.

The adivasis, joined by other poor people, reacted spontaneously and violently when in 1894 the government further curtailed their customary rights threatening their very survival. It was an event, rather a constellation of events, which caught the authorities somewhat unprepared. As the collector was forced to admit, the government was "quite powerless in the presence of the storm", resulting in "serious loss of prestige to the government" [RD, 112 1897: 93]. The adivasis, the commissioner of central division, reported, had "for a while ousted the jurisdiction of the forest department" [Palande and Phalak 1958]. Above all, they succeeded in having the obnoxious notification temporarily withdrawn.

Notwithstanding the people's feelings of dissatisfaction and hatred towards it, the forest department had reasons to congratulate itself on its "success" in this district. In Thana, the revenue derived from forest produce, primarily timber, continued to rise over the years. In 1878-79, Thana showed a net profit of Rs. 42,493 [Adm RFD 1879: 33]. It increased to Rs. 89,953 in 1880-81; Rs. 1,27,645 in 1884-85; Rs. 2,77,659 in 1888-89; decreased slightly to Rs. 2,59,745 in 1892-93 and Rs. 2,63,851 in 1896-97 [RD, 25 1882: 36; RD, 27 1887: 44; RD, 40 1889: 20; Adm RFD 1894: 69; F Adm R 1898: 189].

The success of the forest department was achieved at the cost of the small cultivators, especially the adivasis. The adivasis' material world, and also their symbolic world, so intimately connected with forests, was greatly threatened. In the course of a few decades, adivasis were transformed from being, by and large, independent producers, although at a very low level of subsistence, to tenants and labourers. They were compelled to

commit crimes and were exposed to the tyranny of landlords, forest contractors, forest officials and the new legal system. But they asserted their rights and articulated their grievances in a variety of ways, ensuring their own survival and making forest administration in Thana a difficult task for the government.¹

Liquor Legislations and the Adivasis

References have been made to the grievances of the adivasis with respect to 'abkari', liquor, regulations. It would be in order here to look at the two legislations, the Abkari Act V of 1878 and the Mhowra Act (III of 1892), which affected the lives of the adivasis of this district significantly. The two legislations had the effect of blocking the major sources of liquor - 'toddy', the fermented juice of palm tree and 'mahua' or 'mhowra', a drink made from the flowers of *Bassia Latifolia* - by taxing the former beyond the means of the poor and banning the latter. The new system opened up an important source of revenue for the government. It also gave rise to a class of manufacturers for whom liquor manufacturing became an extremely lucrative business. In an emerging market economy, liquor, too, could be had for money or even land and labour. But with given the persistence of semi-feudal relations of production, liquor became an instrument for exploiting the adivasis.

The main principles of the reform were that no toddy be drawn from trees except by permission and under licence, that for each toddy tree tapped tax under excise be paid and that liquor and toddy be sold in licensed shops with licences auctioned as before. These measures were to be introduced gradually over a number of years [Hardiman 1985: 189, Hardiman 1987].

The effect of the change on the adivasis was best summed up by a British official, F.S.P. Lely, assistant collector of Surat district. He launched a powerful critique of the official policy, highlighting the hardships it had caused the poor adivasi peasants and labourers in his district, ". . . the prohibitive tax has only deprived the women and children of much of their already scanty provision of food, clothes and salt. . . . It cannot be denied that a fair amount of toddy acts, if not as food, yet as compensation for the want of it. It cannot be denied that if not a medicine, yet it is properly believed to be such". Should a moderate, legitimate

supply not be placed within the reach of the people, he rhetorically asked [RD, 9 1884: 215]. His comments applied to Thana as well.

The adivasis resisted the abkari laws by making and consuming illicit liquor. In spite of government measures to curb the distillation of illicit liquor, it was rampant almost in every village in the inland talukas where the mahua grew in abundance. The people discovered ingenious ways to escape detection. As the price of liquor went up, illicit manufacture of liquor became more and more widespread [for details see Munshi 1995: 2323-31; RD, 9 1891: 55; RD, 33 1884: 186; RD, 6 1883: 10].

In accordance with the instructions from the government of India, the Bombay government appointed a committee to further inquire whether the high rate of duty charged on legal spirit in the districts of Thana and Kolaba had not encouraged smuggling and whether the mahua flower was ever used as food in those districts. A committee consisting of three revenue officials of Bombay was appointed and their conclusions were, as expected, in conformity with the government's position. It was stated that the high rate of duty on the licit spirit was not the cause of smuggling in the two districts; that mahua was not a staple article of food of the people, neither was it generally given, in any appreciable measure, to cattle. Finally, that the only way to check the evil of illicit distillation was to bring the free traffic in mahua flowers under legislative control. They even proposed the cutting down of all mahua trees.

On the other hand, a large number of witnesses, the lower level officials as well as non-officials, stated that the flowers were used by the poor, especially by the adivasis, as food for men and cattle when their stock of grain was exhausted, especially during famine. The flower was eaten fresh or dried, by itself or mixed with grain flour and made into bread. Oil extracted from mahua seed was used for purposes of consumption as well as lighting. It was clear that the poor also bartered the mahua flowers for gram, rice or other miscellaneous items of grocery, on which they subsisted during the monsoon. It was also pointed out that formerly the peasants planted mahua trees in plenty as it was profitable but now given the changed circumstances, they were trying to fell the existing trees and sell them off [RD, 6 1883].

The adivasis were reported to have asked the Christians of Bassein taluka to abstain from liquor as a form of protest [RD 112 1897: 80]. Among other things, people demanded that liquor be sold at one anna a bottle and the palm tree tax be abolished. In one instance, it was reported in a local newspaper called *Arunodaya* that people had forced the acting deputy collector to give an order on a stamped paper for liquor to be sold at one anna a seer. With this order they went to a liquor shop and bought a quantity of liquor at one anna per seer and consumed it on the spot [*Arunodaya*, November 25, 1896]. By 1896 the storm had blown over.

The group that benefited from the new liquor laws was the Parsis. Parsi liquor shopkeepers were known to give liquor on credit and to demand labour and even land in return. In 1882, the Gazetteer of the district recorded the presence of Parsi landowners and liquor sellers in the interior villages. Frequent complaints were made against them by the adivasis that "these men press labour for the cultivation of their fields" [Gazetteer op. cit.: 247].

Oral testimonies from the adivasis reconstruct how the outsiders came and settled in their villages several decades ago, acquired a little land, opened liquor shops and often encouraged the adivasis to buy drink on credit. And after the debts increased, they would demand land or money. Since adivasis did not have the money, their lands were taken away and they were turned into tenants on their own land. In this way, the landlords acquired entire villages. These stories are very much a part of the collective memory of the people. Liquor had become an instrument of exploitation of the adivasis by the high-caste moneylender-landlords, particularly the Parsis.

The following story, popular among the adivasis, illustrates this cogently: a Brahmin had a daughter and he wanted to bring home a son-in-law. An adivasi was contacted. The adivasi agreed, but then he sat at home and did not do any work. When his wife asked him why he did not work, he said he wanted implements to work in the forests. He was given the implements. He cut a sandalwood tree and made a cupboard out of it. In the meanwhile, 'Jum', the god of death, wanted to take away the Brahmin. 'Kal' and 'Vel' (both words mean time) were sent as

messengers to take him. The adivasi went to meet the messengers and asked them to go to the forest because the Brahmin was there. He then pushed them inside the cupboard and locked them in. Jum came in search of his messengers in the form of a Parsi. He started a liquor shop and began to offer a little liquor to the people free of charge. The adivasi took his father-in-law to the Parsis shop. They drank and then began to quarrel. The adivasi blurted out the fact about Kal and Vel. The Parsi gave them more and more liquor. He challenged the adivasi about the truth of having locked up Kal and Vel. The adivasi took him to the forest and opened the cupboard. Kal and Vel were freed. Jum then asked Kal and Vel to take the spirit of the adivasi along with the Brahmin's to the land of death. The adivasis believe that this is how death came to them.

The restriction on the availability of mahua and toddy, deprived the adivasis not only of intoxicants, which they surely were, but also of a source of food and nourishment. Besides, in seeing drinking as "immoral" and therefore needing to be curbed, the British overlooked the importance of toddy and of drinking in the adivasi culture. No amount of prohibition stopped the adivasis from drinking, only, as they put it, they drank stuff which was more expensive and of poor quality.

Tenants and Bonded Labourers: Struggle for Liberation

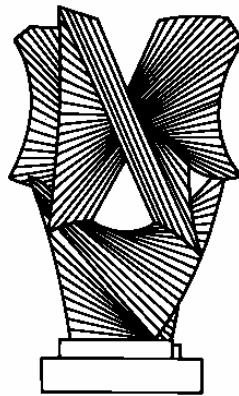
The lower rate of assessment introduced by the British induced a section of the adivasis to take up land for cultivation. Some were known to have become prosperous farmers. But the lack of agricultural implements, poor quality of soil, frequent crop failures and the rigid revenue demand made it imperative for the small cultivators – adivasis as well as non-*adivasi* – to turn to the moneylender for seed loans, consumption loans or money to pay revenue to the government. The alternatives were to give up the land and emigrate to Bombay or other large towns, or to enter into the service of the high caste landlords, the 'Pandharpesha'. Many adivasis leased land on a half-share or a contract basis from the big landholders, generally Brahmins, Prabhus and Kunbis [Gazetteer op. cit.: 530]. By the beginning of the 20th century



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CLIMATE CHANGE JUSTICE

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Climate Change Justice

Eric A. Posner* and Cass R. Sunstein**

Abstract. Greenhouse gas reductions would cost some nations much more than others, and benefit some nations far less than others. Significant reductions would impose especially large costs on the United States, and recent projections suggest that the United States has relatively less to lose from climate change. In these circumstances, what does justice require the United States to do? Many people believe that the United States is required to reduce its greenhouse gas emissions beyond the point that is justified by its own self-interest, simply because the United States is wealthy, and because the nations most at risk from climate change are poor. This argument from distributive justice is complemented by an argument from corrective justice: The existing “stock” of greenhouse gas emissions owes a great deal to the past actions of the United States, and many people think that the United States should do a great deal to reduce a problem for which it is largely responsible. But there are serious difficulties with both of these arguments. Redistribution from the United States to poor people in poor nations might well be desirable, but if so, expenditures on greenhouse gas reductions are a crude means of producing that redistribution: It would be much better to give cash payments directly to people who are now poor. The argument from corrective justice runs into the standard problems that arise when collectivities, such as nations, are treated as moral agents: Many people who have not acted wrongfully end up being forced to provide a remedy to many people who have not been victimized. The conclusion is that while a suitably designed climate change agreement is in the interest of the world, a widely held view is wrong: Arguments from distributive and corrective justice fail to provide strong justifications for imposing special obligations for greenhouse gas reductions on the United States. These arguments have general implications for thinking about both distributive justice and corrective justice arguments in the context of international law and international agreements.

I. Introduction

The problem of climate change raises difficult issues of science, economics, and justice. While the scientific and economic issues have been analyzed in great deal,¹ the question of justice has received comparatively little attention.² Several points are clear. The United States long led the world in greenhouse gas emissions; China has surpassed the United States.³ The two leading emitters now account for about 40 percent of the world’s emissions, but they have independently refused to accept binding emissions

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¹ For an overview of both, see Nicholas Stern, *The Economics of Climate Change* (2007). On the economics, see William Nordhaus, *The Challenge of Global Warming: Economic Models and Environmental Policy* (2007), available at

http://www.econ.yale.edu/~nordhaus/DICEGAMS/dice_mss_060707_pub.pdf; for an overview of the science, see John Houghton, *Global Warming: The Complete Briefing* (3d ed. 2005).

² Valuable treatments include Dale Jamieson, *Adaptation, Mitigation, and Justice*, in *Perspective on Climate Change: Science, Economics, Politics, Ethics* 217 (Walter Sinnott-Armstrong and Richard Howarth eds. 2005); Julia Driver, *Ideal Decision Making and Green Virtues*, in *id.* at 249. Some of the ethical issues are also engaged in Stern, *supra* note.

³ See *infra*.

limitations, apparently because of a belief that the domestic costs of such limitations would exceed the benefits.⁴

The emissions of the United States and China threaten to impose serious losses on other nations and regions, including Europe but above all India and Africa.⁵ For this reason, it is tempting to argue that both nations are, in a sense, engaging in tortious acts against those nations that are most vulnerable to climate change. This argument might seem to have special force as applied to the actions of the United States. While the emissions of the United States are growing relatively slowly, that nation remains by far the largest contributor to the existing “stock” of greenhouse gases. Because of its past contributions, does the United States owe compensation to those nations, or those citizens, most likely to be harmed by climate change? Principles of corrective justice might seem to require that the largest emitting nation pay damages to those who are hurt⁶ – and that they scale back their emissions as well.

Questions of corrective justice are entangled with questions of distributive justice. The United States has the highest Gross Domestic Product of any nation in the world, and its wealth might suggest that it has a special duty to help to reduce the damage associated with climate change. Are the obligations of comparatively poor China, the leading emitter, equivalent to those of the comparatively rich United States, the second-leading emitter? Does it not matter that China’s per capita emissions remain a mere fraction of that of the United States? Perhaps most important: Because of its wealth, should the United States be willing to sign an agreement that is optimal for the world as a whole – but not optimal for the United States?

In this Article, we attempt to make progress on these questions, in a way that is designed to cast light on some important conundrums in the domain of climate change and also in international law more generally. To motivate the analysis, and to put the issues of justice in their starkest form, we start with two admittedly controversial assumptions. First, the world, taken as a whole, would benefit from an agreement to reduce greenhouse gas emissions.⁷ This assumption is reasonable because increasing evidence suggests that the global benefits of imaginable steps – such as a modest carbon tax, growing over time⁸ – are significantly larger than the global costs.⁹ Second, some nations, above all the United States (and very possibly China as well), would not benefit, on net, from an agreement that would be optimal from the world’s point of view.¹⁰

⁴ See Scott Barrett, *Environment & Statecraft* (2004), for a good overview of the American position, with particular reference to the Kyoto Protocol; see National Development and Reform Commission, *People’s Republic of China, China’s National Climate Change Programme* (June 2007), for an overview of the Chinese position.

⁵ See William Nordhaus and Joseph Boyer, *Warming the World* 91 (2000).

⁶ See, e.g., Jagdish Bhagwati, *Global Warming Fund Could Succeed Where Kyoto Failed*, *Financial Times* (Aug. 16, 2006).

⁷ See Nordhaus, *supra* note, at 15; Stern, *supra* note.

⁸ See Nordhaus, *supra* note, at 11.

⁹ See *id.*; Bjorn Lomborg, *Cool It* (2007) (suggesting a \$2 per ton carbon tax).

¹⁰ On the plausibility of this assumption, see Cass R. Sunstein, *The Complex Climate Change Incentives of the China and the United States* (unpublished manuscript 2007).

Suppose, for example, that the world settled on a specified carbon tax – say, \$20 per ton. Such a tax would be likely to impose especially significant costs on the United States, simply because its per capita emissions rate is so high.¹¹ Suppose, finally, that the United States is not as vulnerable as many other nations to serious losses from climate change, and that the expected damage, in terms of health, agriculture, and more, is comparatively low – and that in those terms other nations, such as India and those in Sub-Saharan Africa, are likely to lose much more.¹² If so, the United States might be a net loser from a specified worldwide carbon tax even if the world gains a great deal. Perhaps the optimal carbon tax, for the world, would be \$20 per ton, but the United States would do better with a worldwide carbon tax of \$5 per ton, or \$1 per ton, or even \$0 per ton.

We have said that both assumptions are controversial, and we are aware that they might be questioned. In particular, many people think that the domestic cost-benefit analysis for the United States does justify participation in an international agreement, and such people may well believe that the optimal agreement for the world is close to the optimal agreement for the United States.¹³ But even if this is so, it remains important to specify the content of that agreement. Suppose, as seems clear, that India and Africa would gain a great deal from an agreement, whereas the United States would gain a much lower amount. What, if anything, does this point suggest about the proper content of the agreement?

Let us assume, most starkly, that the United States would lose, on net, from a climate change agreement that is optimal from the standpoint of the world taken as a whole. If so, the standard analysis of the problem is clear: The world should enter into the optimal agreement, and the United States should be given side-payments in return for its participation.¹⁴ The reason for this conclusion is straightforward. The optimal agreement should be assessed by reference to the overall benefits and costs¹⁵ of the relevant commitments for the world. To the extent that the United States is a net loser, the world should act so as to induce it to participate in an agreement that would promote the welfare of the world's citizens, taken as a whole. With side-payments to the United States, of the

¹¹ See *infra*. Note that carbon dioxide is not the only greenhouse gas, and so a carbon tax would be only a partial solution. For expository clarity, however, we will focus on carbon taxes and similar regimes.

¹² See Nordhaus and Boyer, *supra* note, at 91. Broadly in accord is Richard Tol, *Estimates of the Damage Costs of Climate Change*, 21 *Environmental and Resource Economics* 135 (2002).

¹³ See Richard Stewart and Jonathan Wiener, *Reconstructing Climate Policy: Beyond Kyoto* 49-53 (2003), suggesting that participation by the United States is in that nation's interest and suggesting steps that might make participation worthwhile for China as well. For a recent study, arguing for significant steps for the United States and suggesting significant losses for a large part of the United States, see Peter Frumhoff et al., *Confronting Climate Change in the U.S. Northeast* (July 2007), available at <http://www.climatechoices.org/assets/documents/climatechoices/confronting-climate-change-in-the-u-s-northeast.pdf>

¹⁴ Side-payments might take various forms, as we shall see; one possibility would be cash, whereas another would be initial allocations under a cap-and-trade program, see Stewart and Wiener, *supra* note, at 15.

¹⁵ We are not contending that benefits and costs should be understood in purely monetary terms, nor are we saying anything contentious about what benefit-cost analysis should entail. For general discussion, see Matthew Adler and Eric A. Posner, *New Foundations for Cost-Benefit Analysis* (2005).

kind that have elsewhere induced reluctant nations to join environmental treaties,¹⁶ an international agreement could be designed so as to make everyone better off and no one worse off. Who could oppose such an agreement?

Our puzzle is that almost everyone does so. No one is suggesting that the world should offer side-payments to the United States. One reason involves distributive justice. The United States is the richest nation in the world, and many people would find it preposterous to suggest that the world's richest nation should receive compensation for helping to solve a problem faced by the world as a whole, and above all by poor nations.¹⁷ On this view, wealthy nations should be expected to contribute a great deal to solving the climate change problem; side-payments would be perverse. If ideas of distributive justice are at work, it might be far more plausible to suggest that nations should pay China for agreeing to participate in a climate change agreement. And indeed, developing nations, including China, were given financial assistance as an inducement to reduce their emissions of ozone-depleting chemicals.¹⁸ Some people think that a climate change agreement should build on this precedent¹⁹; no one thinks that assistance to the United States, or to other wealthy countries, is in order.

But claims about distributive justice are only part of the story here. Corrective justice matters as well.²⁰ The basic thought is that the largest emitters, above all the United States, have imposed serious risks on other nations. Surely it cannot be right for nations to request payments in return for ceasing to harm others. On the conventional view, wrongdoers should pay for the damage that they have caused and should be asked to stop. They should not be compensated for taking corrective action.

We shall raise serious questions about both accounts here. We accept the view that in many domains, resources should be redistributed from rich nations and rich people to poor nations and poor people.²¹ But significant greenhouse gas reductions are a crude and somewhat puzzling way of attempting to achieve redistributive goals. The arc of human history shows that in the future, people are likely to be much wealthier than

¹⁶ Thus, for example, Russia and Eastern Europe were given emissions rights worth billions of dollars in the Kyoto Protocol. See Nordhaus and Boyer, *supra* note, at 162. Significant side-payments were given to poor nations in connection with the Montreal Protocol. See Scott Barrett, *Environment & Statecraft* 346-49 (2004). See the general treatment of the "Side Payments Game" in *id.* at 335-51.

¹⁷ In the exhaustive analysis in *Stern Review*, *supra* note, for example, there is no suggestion of side-payments to the United States. The dominant view among philosophers is decidedly to the contrary. See, e.g., Henry Shue, *Subsistence Emissions and Luxury Emissions*, 15 *Law & Pol'y* 39 (1993); Peter Singer, *One World* (2002).

¹⁸ See Cass R. Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 *Harv Env L Rev* 1, 16-17 (2007). For other examples of side payments in environmental treaties, see Mark A. Drumbl, *Northern Economic Obligation, Southern Moral Entitlement and International Environmental Governance*, 27 *Colum. J. Envtl. L.* 363 (2002).

¹⁹ Sheila Olmstead and Robert N. Stavins, *A Meaningful Second Commitment Period for the Kyoto Protocol*, *The Economists' Voice* (May 2007), available at www.bepress.com/ev.

²⁰ See, e.g., Daniel Farber, *Adapting to Climate Change: Who Should Pay*, *U Pa L Rev* (forthcoming 2007).

²¹ See Eric A. Posner, *International Law: A Welfarist Approach*, 73 *U. Chi. L. Rev.* 487 (2006).

people are now.²² Why should the wealthy countries give money to future poor people, rather than to current poor people? (Current emissions reductions will generally fail to help current poor people, simply because the effects of such reductions will not be felt for many years.) In any case, nations are not people; they are collections of people. Redistribution from wealthy countries to poor countries is not the same as redistribution from wealthy people to poor people. For one thing, many poor people in some countries will benefit from global warming, to the extent that agricultural productivity will increase²³ and to the extent that they will suffer less from extremes of cold.²⁴ For another thing, poor people in wealthy countries may well pay a large part of the bill for emissions reductions.

The upshot is that if wealthy people in wealthy nations want to help poor people in poor nations, emissions reductions are far from the best means by which they might to do so. Our puzzle, then, is why distributive justice is taken to require wealthy nations to help poor ones in the context of climate change, when wealthy nations are not being asked to help poor ones in areas in which the argument for help is significantly stronger.

We also accept the view that when people in one nation wrongfully harm people in another nation, the wrongdoers have a moral obligation to provide a remedy to the victims. It might seem to follow that the largest emitters, and above all the United States, have a special obligation to remedy the harms they have caused, and certainly should not be given side-payments. But the application of standard principles of corrective justice to problems of climate change is, at best, extremely troublesome. As we shall show, corrective justice arguments in the domain of climate change raise many of the same problems as corrective justice arguments in the context of reparations more generally. Nations are not individuals: they do not have mental states and cannot, except metaphorically, act. Blame must ordinarily be apportioned to individuals, and it is hard to blame all greenhouse gas-emitters for wrongful behavior, especially those from the past who are most responsible for the current stock of greenhouse gases in the atmosphere.

Our minimal submissions are that the distributive justice argument must be separated from the corrective justice argument, and that once the two arguments are separated, both of them run into serious problems. If the United States wants to assist poor nations, reductions in greenhouse gas emissions are hardly the best way for it to accomplish that goal. It is true that many people in poor nations are at risk because of the actions of many people in the United States, but the idea of corrective justice does not easily justify any kind of transfer from contemporary Americans to people now or eventually living in (say) India and Africa.

This conclusion should not be misunderstood. We do not question the proposition that an international agreement to control greenhouse gases, with American participation,

²² See Remarks of Vernon Smith, in *Global Crises, Global Solutions* 630, 635 (Bjorn Lomborg ed. 2004); Remarks of Thomas Schelling, in *id.* at 627.

²³ See Nordhaus and Boyer, *supra* note, at 76 (showing benefits in China, Japan, and Russia).

²⁴ See Bjorn Lomborg, *Cool It* (2007).

is justified,²⁵ and all things considered, the United States should probably participate even if the domestic cost-benefit does not clearly justify such participation.²⁶ The reason is that if the United States is able to confer substantial benefits on the world as a whole, it should probably do so even if it would be a net loser, or even if it would gain more from an agreement of a different sort. If we care about social welfare, we should approve of a situation in which a wealthy nation is willing to engage in a degree of self-sacrifice when the world benefits more than that nation loses. Our goal here is not to question these propositions, but to show that contrary to widespread beliefs,²⁷ there are real problems in attempting to justify them by reference to distributive or corrective justice.²⁸

As we shall see, identification of those problems has general implications for thinking about distributive and corrective justice in the context of international law and international agreements. In many domains, distributive justice might seem to require wealthy nations to make special contributions.²⁹ Such nations might do well to pay their proportionate share or more, but it is important to see that other redistributive strategies might be much better for helping those who are most disadvantaged. Corrective justice arguments arise in many areas in which previous generations in one nation acted in a way that harmed or threatens to harm those in another nation.³⁰ Our argument suggests that if the goal is to act in accordance with corrective justice, it is important to identify both the actors and the victims; abstract references to nations as wrongdoers, and nations as victims, often beg or obscure the key questions.

The rest of this Article comes in three parts. Part II briefly outlines relevant facts about the climate change problem. Parts III and IV turn to the questions of distributive justice and corrective justice, respectively. Part V discusses the view, pressed by China in particular, that emissions rights should be allocated on a per capita basis. As we will see, this claim amounts to a plea for significant redistribution from wealthy countries, above all the United States, to poor countries, above all China and India.

²⁵ See Nordhaus, *supra* note, at 137. Notably, Bjorn Lomborg, *Cool It* (2007), a skeptical treatment of many arguments on behalf of greenhouse gas reductions, argues for a significant tax on carbon emissions. *Id.* at 153.

²⁶ See Stewart and Wiener, *supra* note, at 49-52.

²⁷ See, e.g., Jamieson, *supra* note.

²⁸ Among international lawyers, distributive justice and corrective justice ideas are invoked in favor of the principle of “common but differentiated responsibilities,” the idea that wealthier and more-at-fault nations should contribute disproportionately to the creation of international public goods. See Rio Declaration on Environment and Development, UN Doc. A/Conf. 151/5/Rev. 1 (1992), 31 ILM 874 (1992). For a valuable discussion, which touches on both the distributive justice and corrective justice problems with this view, see Christopher D. Stone, *Common But Differentiated Responsibility in International Law*, 98 *Am. J. Int’l L.* 276 (2004). See also Lavanya Rajamani, *Differential Treatment in International Environmental Law* (Oxford, 2006). We turn to the notion of common but differentiated responsibilities in Part IV.

²⁹ See the brief discussion of biodiversity in Barrett, *supra* note, at 350.

³⁰ See *infra*.

II. Ethically Relevant Facts

It is an understatement to say that there is a voluminous literature on the science and economics of climate change.³¹ We concentrate in this section on a review of those facts that are most relevant to the questions of justice, and that help establish the complex relationship between the interests of the world, taken as a whole, and the interests of the United States. As we shall see, different nations stand to gain and to lose significantly different amounts both from climate change and from greenhouse gas emissions reductions. Because it provides an illuminating comparison, with important implications for questions of justice, we shall draw attention to the situation of China as well.

A. In General

As we have noted, a strong consensus supports the view that the world would benefit from significant steps to control greenhouse gas emissions.³² If all of the major emitting nations agreed to such steps, the benefits would almost certainly exceed the costs.³³ To be sure, there is continuing disagreement about the appropriate timing and severity of emissions reductions.³⁴ But as compared to “business as usual,” much would be gained, and less lost, if modest reduction policies were adopted soon, followed by larger ones over time.³⁵

There is also a consensus that if the world does undertake an effort to reduce greenhouse gas emissions, it should select one of two possible approaches.³⁶ The first is an emissions tax, designed to capture the externalities associated with climate change. A worldwide tax on carbon emissions might start relatively low – at, say, \$10 per ton – and increase as technology advances.³⁷ On an approach of this kind, it is generally assumed that the tax would be uniform. Citizens of Russia, China, India, the United States, France, and so forth would all pay the same tax. There is a disagreement about the proper magnitude of the tax,³⁸ and as we shall see, different nations would gain and lose different amounts from any given tax.

³¹ See notes supra.

³² See notes supra.

³³ See Nordhaus, supra note, at 137 (claiming a \$3.4 trillion net present-value benefit of an “optimal” climate change policy).

³⁴ Compare Stern, supra note (arguing for aggressive, immediate restrictions), with Lomborg, supra note (arguing for modest carbon tax). Much of the disagreement between Stern on the one hand and those who favor a more modest approach stems from a difference over the appropriate discount rate; Stern’s conclusion is driven by a choice of a discount rate close to zero. See Nordhaus, supra note, at 108-109. For our purposes it is not necessary to explore the resulting debates. For discussion, see Symposium, Intergenerational Equity and Discounting, 74 U. Chi. L. Rev. 1 (2007).

³⁵ See Nordhaus, supra note, at 147. Diverse perspectives and vigorous debates can be found in the various contributions to Symposium, Climate Change, 7 World Economics vol. 4 (2006); Symposium, 8 World Economics vol. 1 (2007); Symposium, Climate Change, 8 World Economics vol. 2 (2007).

³⁶ See, e.g., Nordhaus, supra note (defending carbon tax).

³⁷ See id.; Lomborg, supra note, at 153 (suggesting a range of between two dollars and fourteen dollars per ton).

³⁸ See note supra.

The second approach would involve a system of cap-and-trade, akin to that in the Kyoto Protocol.³⁹ Under such a system, nations might create a worldwide “cap” on aggregate emissions – calling, say, for a 10 percent reduction from worldwide emissions in 2007, with further reductions over time. A cap-and-trade system would require a judgment about the appropriate cap and also an initial allocation of emissions rights. On one version, roughly embodied in the Kyoto Protocol, existing emissions levels would provide the foundation for initial allocations; nations would have to reduce by a certain percentage from those existing levels.⁴⁰ As we will see, the use of existing levels is highly controversial and in a sense arbitrary.⁴¹ But analytically, it is not very different from a uniform carbon tax; in both cases, current practices are the starting point for regulatory measures.

It is important to see that an agreement to control greenhouse gas emissions loses nearly all of its point if only a few nations are willing to participate. The Kyoto Protocol, for example, required most of the industrialized world to cut emissions significantly, but because developing nations refused to accept any emissions restrictions, a prominent study offers this stunning finding: Full compliance with the agreement would have reduced anticipated warming by merely 0.03 C by 2100.⁴² Consider the fact that the Intergovernmental Panel on Climate Change now provides a “best estimate” of warming ranging from 1.8 C to 4.0 C by 2100,⁴³ under a “business as usual” scenario. Not much would be gained if all nations complied with their Kyoto obligations and reduced those figures to a range of 1.77 C to 3.97 C.⁴⁴

A more optimistic estimate finds that the Kyoto Protocol might reduce global warming by as much as 0.28 C by 2100, and the difference between “business as usual” warming and warming between 1.52 C and 3.72 C is not exactly trivial.⁴⁵ But if developing nations were included, far more significant reductions could be anticipated.

The need for broad participation has important implications for questions of efficiency, effectiveness, and justice.⁴⁶ Suppose, for example, that Northeastern states followed what has been urged as a “3 percent solution,” in the form of annual emissions reductions of 3 percent.⁴⁷ With such reductions, the total effect on warming by 2100 would be very small – probably well under 0.01 C. By itself, such an approach would

³⁹ See Stewart and Wiener, *supra* note.

⁴⁰ See the outline in Robert Percival et al., *Environmental Regulation* (2006).

⁴¹ See Nordhaus and Boyer, *supra* note, at 167-68; Stewart and Wiener, *supra* note, at 85-88.

⁴² Nordhaus and Boyer, *supra* note, at 152.

⁴³ See Intergovernmental Panel on Climate Change, *supra* note; Nordhaus, *supra* note at 11.

⁴⁴ For an estimate of the savings from a 0.3 C reduction in warming, see Nordhaus and Boyer, *supra* note, at 156-167 (suggesting \$96 billion in worldwide benefits).

⁴⁵ See Stewart and Wiener, *supra* note, at 45-46. Lomborg, *supra* note, at 22, finds that the Kyoto Protocol, with American participation, would reduce warming by 0.1 F by 2050 and by 0.3 F by 2100; the analysis is based on T.M. L. Wigley, *The Kyoto Protocol: CO₂, CH₄, and Climate Implications*, 25 *Geophysical Research Letters* 2285 (1998).

⁴⁶ See Nordhaus, *supra* note at 76.

⁴⁷ Peter Frumhoff et al., *Confronting Climate Change in the U.S. Northeast* (July 2007), available at <http://www.climatechoices.org/assets/documents/climatechoices/confronting-climate-change-in-the-u-s-northeast.pdf>

impose significant costs, including some hardship on people who are not wealthy, in return for trivial gains.⁴⁸ And if the United States committed to significant reductions on its own – by, say, capping emissions at the rates prevailing in 2000 – the commitment would have little discernible effect on climate change by 2100 (again probably under 0.01 C⁴⁹). By itself, such an approach would impose real costs on the United States, benefit that nation very little or perhaps not at all, and fail to do much for the world as a whole.⁵⁰ As we will see, China’s emissions already exceed and will soon dwarf those of the United States; but if China acted on its own to freeze its emissions as of 2007, the effects would also be modest (again probably under 0.01 C).

In the context of ozone-depleting chemicals, the analysis was altogether different. Unilateral action by the United States, restricting the emissions of such chemicals, was very much in the interest of the United States.⁵¹ Such unilateral action was relatively inexpensive and by itself promised to produce significant gains in the form of reduced cases of skin cancer and cataracts.⁵² For greenhouse gases, by contrast, it is plain that unilateral action by the United States would not be in the domestic interest of that nation, simply because the cost would be significant and the benefits necessarily small.⁵³

B. Emitters

To understand the issues of justice and the motivations of the various actors, it is important to appreciate the disparities in emissions across nations. We do not have clear data on the costs of emissions reductions for different nations, but it seems clear that the largest carbon emitters would bear the largest burdens from (say) a worldwide carbon tax.⁵⁴ For a snapshot, consider the following:

⁴⁸ It is possible, of course, that steps of this kind could spur other such steps, in which case the benefits would increase.

⁴⁹ This judgment comes from the finding that the Kyoto Protocol itself, with American participation, would reduce warming by 0.3 C. If the United States stabilized emissions at 2000 levels, it would produce a small fraction of that benefit, first because the United States is only one nation, and second because Kyoto called for a percentage reduction (8 percent) from 1990.

⁵⁰ We are not arguing against such a step, which, as noted, could spur additional ones. We return to this issue below. See *infra*.

⁵¹ See Barrett, *supra* note, at 228.

⁵² See *id.*

⁵³ Note as before that unilateral action might be justified as a way of spurring activity by a range of nations, above all the developing world, which is most unlikely to act if the United States does not. Our goal is to state the consequences of unilateral action, not to argue against it.

⁵⁴ This judgment is crude. If a high-emitting nation could reduce its emissions at relatively low cost, perhaps because of technological innovation, its burdens of course would be lower.

Table 1
*Share of Global Emissions, 2003 and 2004*⁵⁵

	2003	2004
United States	22.7%	22.0%
OECD Europe	16.9%	16.3%
China	15.3%	17.5%
India	4.1%	4.1%
Japan	4.9%	4.7%
Africa	3.5%	3.4%
Russia	4.2%	4.2%

As early as 2004, then, the United States and China emerged as the top emitters, accounting for nearly 40% of the world's total. If the goal is to understand the costs of controls, however, this table does not tell us nearly enough; we need to know future projections as well. Existing projections suggest that the largest contributors are likely to continue to qualify as such—but that major shifts will occur, above all with emissions growth in China and India, and emissions reductions in Russia and Germany.

Table 2
*Carbon Dioxide Emissions Changes, 1990–2004*⁵⁶

	1990–2004
China	108.3%
United States	19.8%
India	87.5%
South Korea	104.6%
Iran	110.7%
Indonesia	137.7%
Saudi Arabia	85.6%
Brazil	67.8%
Spain	59.0%
Pakistan	96.6%
Poland	-15.3%
EU-25	1.6%
Germany	-12.2%
Ukraine	-47.1%
Russia	-24.8%

With these trends, we can project changes to 2030. At that time, the developing world is expected to contribute no less than 55% of total emissions, with 45% coming

⁵⁵ United States Energy Information Administration, *International Energy Outlook 2007* 93 (2007).

⁵⁶ Emissions of CO₂ from energy-related sources only. See International Energy Agency, *CO₂ Emissions From Fuel Combustion 1971-2004 II.4-II.7* (2006).

from developed nations.⁵⁷ At that time, the United States is expected to be well below China.

Table 3
*Relative Contributions of Annual Carbon Dioxide Emissions by Country/Region (Approximate % of Worldwide Emissions)*⁵⁸

	1990	2003	2004	2010	2015	2020	2025	2030
United States	23.5%	22.7%	22.0%	20.1%	19.4%	18.8%	18.7%	18.5%
OECD Europe	19.3%	16.9%	16.3%	14.6%	13.4%	12.4%	11.6%	10.9%
China	10.5%	15.3%	17.5%	21.1%	22.4%	23.9%	25.0%	26.2%
India	2.7%	4.1%	4.1%	4.2%	4.4%	4.7%	4.9%	5.0%
Japan	4.8%	4.9%	4.7%	4.1%	3.8%	3.5%	3.3%	3.0%
Africa	3.1%	3.5%	3.4%	3.7%	3.8%	3.9%	3.9%	3.9%

This projection is fairly recent, but with explosive emissions growth in China, it is already out of date. China surpassed the United States in CO₂ emissions in June 2007 or perhaps before.⁵⁹

The numbers we have presented refer to *flows*: how much a given nation emits on an annual basis. Also relevant for claims of justice, as we shall see, are the *stocks*: how much a given nation has, over time, contributed to the current stock of greenhouse gases in the atmosphere. Table 4 tells the story.

Table 4
*Cumulative Emissions (1850-2003)*⁶⁰

	CO2	Rank	Share
United States	318740	1	29%
China	85314	4	8%
European Union	286764	2	26%
Russia	88302	3	8%
Japan	45198	7	4%
India	24347	9	2%
Germany	78499	5	7%
United Kingdom	67348	6	6%
Canada	23378	11	2%
South Korea	8500	23	1%

The countries are listed in the order of their annual emissions as of 2003. Column 3 shows that while the United States is by far the highest ranked contributor to the stock

⁵⁷ US Energy Information Administration, *supra* note.

⁵⁸ *Id.*

⁵⁹ See Audra Ang, China Overtakes U.S. as Top CO₂ Emitter, Associated Press Online, June 21, 2007

⁶⁰ See World Resources Institute's Climate Analysis Indicators Tool (<http://cait.wri.org/>). CO₂ is in megatons.

as well as to flows, China drops to a distant fourth, India to ninth, and South Korea to twenty-third.

The reason for these disparities is that greenhouse gases dissipate very slowly, so countries that industrialized earlier have contributed more to the stock than countries that industrialized later, even though the latter might today contribute more on an annual basis. About half the CO₂ emitted in 1907 still remains in the atmosphere.⁶¹ And if the world stopped emitting CO₂ today, the stock of CO₂ in the atmosphere in 2107 would remain at about 90 percent of what it is now.⁶² This point greatly matters to many issues; it helps to explain, for example, why even significant emissions reductions will reduce but hardly halt anticipated warming. We are now in a better position to see why unilateral action, even by the largest emitters, will accomplish so little. Such action cannot affect the existing stock, and by definition, it will do nothing (directly) about the rest of the flow.

C. Victims

Which nations are expected to suffer most from climate change? Of course the precise figures are greatly disputed⁶³; the extent of the damage in 2100 cannot be specified now, in part because of a lack of information about each nation's ability to adapt to warmer climates. But it is generally agreed that the poorest nations will be the biggest losers by far.⁶⁴ The wealthy nations, including the United States, are in a much better position for three independent reasons.⁶⁵ First, they have much more in the way of adaptive capacity. Second, a smaller percentage of their economy depends on agriculture, a sector that is highly vulnerable to climate change. Third, the wealthy nations are generally in the cooler, higher latitudes, which also decreases their vulnerability.⁶⁶

To get a handle on the problem, let us assume that warming will be 2.5 C, and consider a prominent estimate of how the harms are likely to vary across nations and regions:

⁶¹ See IPCC, *Climate Change 2007: The Physical Science Basis*. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, FAQ 10.3 (2007).

⁶² *Id.*

⁶³ For various accounts, see Stern, *supra* note; Intergovernmental Panel on Climate Change.

⁶⁴ Stern, *supra* note, at 139; Richard Tol, *Estimates of the Damage Costs of Climate Change*, 21 *Environmental and Resource Economics* 135 (2002).

⁶⁵ Stern, *supra* note, at 139.

⁶⁶ *Id.*

Table 5
Damages of a 2.5 C Degree Warming As a Percentage of GDP⁶⁷

India	4.93
Africa	3.91
OECD Europe	2.83
High income OPEC	1.95
Eastern Europe	0.71
Japan	0.50
United States	0.45
China	0.22
Russia	-0.65

On these estimates, it is readily apparent that some nations are far more vulnerable than others.⁶⁸ The United States, China, and Russia are expected to lose relatively little from 2.5 C warming; indeed, Russia is expected to gain. By contrast, India and Africa are anticipated to be massive losers. India is expected to experience devastating losses in terms of both health and agriculture. In terms of health alone, India has been projected to lose 3,600,000 years of life because of climate-related diseases, with 769,000 years of life lost from malaria.⁶⁹ For Africa, the major problem involves health, with a massive anticipated increase in climate-related diseases.⁷⁰ Sub-Saharan Africa has been projected to lose 26,677,000 years of life because of climate-related diseases, with 24,385,000 coming from malaria.⁷¹

By contrast, the United States faces significant but unquestionably more limited threats to both agriculture and health. Consider a careful study of the long-run effects of climate change on a range of economic variables in the United States.⁷² The study offers both optimistic projections by 2100, including a high level of adaptation and low warming, and pessimistic projections, involving little adaptation and higher warming. For 3 C warming, the most optimistic case projects an increase of one percent in GDP⁷³; the benefits are highest at 2 C warming and decline from 3.5 C. The most pessimistic case

⁶⁷ Nordhaus and Boyer, *supra* note, at 91.

⁶⁸ Tol, *supra* note, is in general accord. William Cline, *Climate Change*, in *Global Problems, Global Solutions* 13 (Bjorn Lomborg ed. 2004), and Frank Ackerman and Ian Finlayson, *The Economics of Inaction on Climate Change: A Sensitivity Analysis* (forthcoming 2007), offer a picture of more serious monetized damage from climate change.

⁶⁹ Nordhaus and Boyer, *supra* note, at 81.

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² See Dale Jorgenson et al., *U.S. Market Consequences of Global Climate Change* (2004), available at http://www.pewclimate.org/global-warming-in-depth/all_reports/marketconsequences; see also the brief summary in Stern, *supra* note, at 147-148.

⁷³ *Id.*

projects losses of 1.2 percent of GDP at 3 C.⁷⁴ These estimates should not be taken as undisputed, and the risk of catastrophe greatly complicates matters.⁷⁵ But to the extent that the United States anticipates that it is likely to lose little, on net, from climate change, its incentive to agree to expensive emissions reductions will not be very high.⁷⁶ And if the United States anticipates a realistic “worst case,” at 3 C warming, of 1.2 percent loss in GDP by 2100, the incentive is relatively weak.

Like Russia, China has been projected to benefit in terms of agriculture,⁷⁷ and while it will suffer health losses, they are relatively modest, far below those expected in Africa and India.⁷⁸ On one projection, China will lose 603,000 years of life from climate-related causes, and just 8000 from malaria.⁷⁹ The loss of more than 600,000 years of life is highly significant, but it is far below the corresponding losses for the most threatened nations. To the extent that the losses are not overwhelming, we might expect that China would be unlikely to be particularly interested in reducing greenhouse gas emissions, at least on these figures; thus far, the nation’s behavior is consistent with that prediction.⁸⁰ For China, a higher priority might well be, and indeed has been, economic growth, even or perhaps especially if the goal is to prevent premature death. Note in this regard the striking fact that the citizens of China and the United States are less concerned about climate change than are the citizens of Japan, France, Spain, India, Britain, and Germany.⁸¹

From this brief survey, it seems useful to analyze the questions of justice by assuming that the world would benefit from an agreement to control greenhouse gas emissions; that the United States would have to pay a significant amount to reduce its emissions⁸²; that some nations would benefit far more than others from world-wide reductions; and that the United States would not be the largest beneficiary and could even be a net loser from a large uniform carbon tax or from a cap-and-trade program that requires major reductions from existing emissions levels.

Our primary question is how to understand the moral obligations of the United States; we are secondarily interested in the proper approach to China. Assume, for

⁷⁴ Id.

⁷⁵ See *infra*; National Research Council, *Abrupt Climate Change: Inevitable Surprises* (2004); *Avoiding Dangerous Climate Change* (Hans Schellnuber et al. eds 2006). For a technical discussion, see Martin Weitzman, *Structural Uncertainty and the Value of a Statistical Life in the Economics of Catastrophic Climate Change* (2007), available at <http://www.aei-brookings.org/publications/abstract.php?pid=1196>

⁷⁶ A dated but helpful overview of various assessments can be found in Nordhaus and Boyer, *supra* note, at 70.

⁷⁷ See *id* at 76.

⁷⁸ See *id* at 81.

⁷⁹ Id.

⁸⁰ See Geoffrey York, Citing “Right To Development,” *China Rejects Emission Cap*, *Globe and Mail*, June 5, 2007, at A1.

⁸¹ See *Doing It Their Way*, *The Economist* 22 (Sept. 9-16, 2006).

⁸² This point is confirmed in the context of the Kyoto Protocol in Nordhaus and Boyer, *supra* note; the United States would have had to pay by far the most of any nation to comply with its obligations. *Id.* at 91. On one estimate, the United States would have had to pay between 50% and 80% of the total cost. See Stewart and Wiener, *supra* note.

purposes of clarifying the problem, that the optimal global carbon tax is \$40 per ton of carbon. On the basis of the evidence above, it could well be that the optimal tax for the United States is just \$20 per ton, while the optimal tax for China is only \$10 per ton. If we assume that nations are motivated by domestic self-interest, this means that a \$10 per ton agreement should be feasible; a \$20 per ton agreement is feasible too, but only if others pay China \$10 per ton to reduce its emissions; and a \$40 per ton agreement is feasible as well, but only if others pay the United States \$20 per ton, and China \$30 per ton, to reduce their emissions.

It is tempting to think that, on the assumptions that we have given, the United States should actually pay \$40 per ton, and perhaps that China should too. On one view, the United States, at least, should face special obligations in the context of climate change – special in the distinctive sense that the United States should sign an agreement that is in the world’s interest but not its own. It would be possible to go further and to suggest that the United States is obliged to transfer large sums of money to compensate (poor? all?) countries at risk from climate change. We now turn to the foundations of these views.

III. Climate Change and Distributive Justice

To separate issues of distributive justice from those of corrective justice, and to clarify intuitions, let us begin with a risk of natural calamity that does not involve human action at all.

A. The Asteroid

Imagine that India faces a serious new threat of some kind – say, a threat of a collision with a large asteroid. Imagine too that the threat will not materialize for a century. Imagine finally that the threat can be eliminated, today, at a cost. India would be devastated by having to bear that cost now; as a practical matter, it lacks the resources to do so. But if the world acts as a whole, it can begin to build technology that will allow it to divert the asteroid, thus ensuring that it does not collide with India a century hence. The cost is high, but it is lower than the discounted benefit of eliminating the threat. If the world delays, it might also be able to eliminate the threat, or to reduce the damage if it comes to fruition. But many scientists believe that the best approach, considering relevant costs and benefits, is to start immediately to build technology that will divert the asteroid.

Are wealthy nations, such the United States, obliged to contribute significant sums of money to protect India from the asteroid? On grounds of distributive justice, it is tempting to think so. But if we do reach that conclusion, how is the case different from one in which India contends, now, that it would be able to avert millions of premature deaths from disease and malnutrition if the United States gave it (say) one or two percent of its Gross Domestic Product? If one nation is threatened by malaria or a tsunami, other nations might well agree that it is appropriate to help; it is certainly generous and in that

sense commendable to assist those in need. But even generous nations do not conventionally think that a threatened nation has an entitlement to their assistance.⁸³

The problem of the asteroid threat does have a significant difference from that of climate change, whose adverse effects are not limited to a single nation. To make the analogy closer, let us assume that all nations are threatened by the asteroid, in the sense that it is not possible to project where the collision will occur; scientists believe that each nation faces a risk. But the risk is not identical. Because of its adaptive capacity, its technology, and a range of other factors, let us stipulate that the United States is less vulnerable to serious damage than (for example) India and the nations of Africa and Europe. Otherwise the problem is the same. Under this assumption, the world will certainly act to divert the asteroid, and it seems clear that the United States will contribute substantial resources for that purpose. Let us suppose that all nations favor an international agreement that requires contributions to a general fund, but that because it is less vulnerable, the United States believes that the fund should be smaller than the fund favored by the more vulnerable nations of Africa and Europe, and by India. From the standpoint of domestic self-interest, then, those nations with the most to lose will naturally seek a larger fund than those nations facing lower risks.

At first glance, it might seem intuitive to think that the United States should accept the proposal for the larger fund, simply because it is so wealthy. If resources should be redistributed from rich to poor, on the ground that redistribution would increase overall welfare or promote fairness,⁸⁴ the intuition appears sound. But there is an immediate problem: If redistribution from rich nations to poor nations is *generally* desirable, it is not at all clear that it should take the particular form of a deal in which the United States joins an agreement that is not in its interest. The more sensible kind of redistribution would be a cash transfer, so that poor nations can use the money as they see fit. Perhaps India would prefer to spend the money on education, or on AIDS prevention, or on health care in general. If redistribution is what is sought, a generous deal with respect to the threat of an asteroid collision seems a crude way of achieving it. Analytically, that deal has some similarities to a grant of housing assistance to poor people, when poor people might prefer to spend the money on food or health care. If redistribution is desirable, housing assistance is better than nothing, but it remains puzzling why wealthy nations should be willing to protect poor nations from the risks of asteroid collisions (or climate change), while not being willing to give them resources with which they can set their own priorities. Indeed, a generous deal with respect to the asteroid threat is in a sense worse than housing assistance, as a redistributive strategy, because by hypothesis, many of the beneficiaries of the deal are in rich nations and are not poor at all – a point to which we will return.

There is a further difficulty. We have stipulated that the asteroid will not hit the earth for another 100 years. If the world takes action now, it will be spending current

⁸³ Some people appear to believe that poor nations have an entitlement to help from wealthy nations. See Martha C. Nussbaum, *Frontiers of Justice* (2005). But even if this is so, assistance in the case we are describing is less valuable than direct financial aid – a point that we shall be emphasizing.

⁸⁴ See Posner, *supra* note; Nussbaum, *supra* note.

resources for the sake of future generations, which are likely to be much richer.⁸⁵ The current poor citizens of poor nations are probably much poorer than will be the *future* poor citizens of those nations. If the goal is to help the poor, it is odd for the United States to spend significant resources to help posterity while neglecting the present.⁸⁶ Thus far, then, the claim that the United States should join what seems, to it, to be an unjustifiably costly agreement to divert the asteroid is doubly puzzling. Poor nations would benefit more from cash transfers, and the current poor have a stronger claim to assistance than the future (less) poor.

From the standpoint of distributional justice, there are additional problems. Nations are not people; they are collections of people, ranging from very rich to very poor. Wealthy countries, such as the United States, have many poor people, and poor countries, such as India, have many rich people. If the United States is paying a lot of money to avert the threat of an asteroid collision, it would be good to know whether that cost is being paid, in turn, by wealthy Americans or by poor Americans. If redistribution is our goal, it would also be good to know whether the beneficiaries are mostly rich or mostly poor. Many of the beneficiaries of actions to reduce a worldwide risk are in wealthy nations, and so it should be clear that the class of those who are helped will include many people who are not poor at all. Because the median member of wealthy nations is wealthier than the median member of poor nations, it is plausible to think that if wealthy nations contribute a disproportionately high amount to the joint endeavor, the distributive effects will be good. For example, the Americans who are asked to make the relevant payments are, on average, wealthier than the Indians who are paying less. But asking Americans to contribute more to a joint endeavor is hardly the best way of achieving the goal of transferring wealth from the rich to the poor.

B. Climate Change: From Whom to Whom?

In terms of distributive justice, the problem of climate change is closely analogous to the asteroid problem. In fact, the argument from distributive justice is even weaker in the case of climate change. No one would gain from an asteroid collision, but millions of people would benefit from climate change.⁸⁷ Many people die from cold, and to the extent that warming reduces cold, it will save lives.⁸⁸ Warming will also produce monetary benefits in many places, above all as a result of increases in agricultural productivity, for example in Russia.⁸⁹ Indeed, many millions of poor people are likely to benefit from climate change.⁹⁰ Some of them will live when they would otherwise die from extreme cold.⁹¹ In China, many millions of people living in rural areas continue to

⁸⁵ See Schelling, *supra* note.

⁸⁶ We are putting to one side the possibility that technological change will make it easier to divert the asteroid in the future. By hypothesis, specialists do believe that cost-benefit analysis justifies immediate action. But it is possible that because of technological advances, future generations will be able to eliminate the threat more cheaply than present generations can.

⁸⁷ See Todd Sandler, *Global Public Goods* (2004); Lomborg, *supra* note.

⁸⁸ See Lomborg, *supra* note.

⁸⁹ See Nordhaus and Boyer, *supra* note, at 91.

⁹⁰ *Id.*

⁹¹ See Lomborg, *supra* note.

be extremely poor despite the increasing prosperity of the nation as a whole. These people are among the poorest in the world. For at least some of these people, climate change could well provide benefits by increasing the productivity of their land.⁹²

In addition, many millions of poor people would be hurt by the cost of emissions reductions. They would bear that cost in the form of higher energy bills, lost jobs, and increased poverty. Recall too that industrialized and relatively wealthy European nations have been found to be at greater risk than the relatively poorer China.⁹³

It follows that purely as an instrument of redistribution, emission reductions on the part of the United States are quite crude. Although a suitably designed emissions control agreement would almost certainly help poor people more than it would hurt them, because disadvantaged people in Africa and India are at such grave risk,⁹⁴ there is a weak connection between distributive goals on the one hand and requiring wealthy countries to pay for emissions reductions on the other.

To see the problem more concretely, suppose that Americans (and the same could be said about citizens in other wealthy countries) are willing to devote a certain portion, X , of their national income to helping people living in poor countries. The question is, How is X best spent? If X is committed to emissions controls, then X is being spent to benefit wealthy Europeans as well as impoverished Indians, and, perversely, X is being spent to harm some impoverished people living in China and Russia. And if all of X is spent on global emissions control, then none of X is being spent to purchase malaria nets or to distribute AIDS drugs—which are highly effective ways of helping poor people who are alive today rather than poor people who will be alive in one hundred years.⁹⁵

One response to this argument is that Americans should pay more than X : they should pay $2X$ or $5X$ or $100X$. But this argument is not responsive. If Americans are willing to pay $2X$ or $5X$ or $100X$, the question remains how this money should be used, and it is quite possible that $100X$ is better spent on malaria nets and AIDS drugs than on global emissions control, if the only goal is to help the poor.

To be sure, it may turn out to be the case that, in fact, the best way to spend X is to cut greenhouse gas emissions. It could be the case, for example, that more lives are saved from cutting greenhouse gas emissions than from distributing malaria nets and AIDS drugs, given a constant amount of money, and taking into account the fact that future lives and current lives must be put on a common metric.⁹⁶ A legitimate argument for cutting greenhouse gas emissions is that it bypasses the governments of poor states more completely than other forms of development aid do. This might be counted as a virtue because the governments of poor states are, to a large degree, inefficient and

⁹² See Nordhaus and Boyer, *supra* note, at 76 (showing agricultural gain from 2.5 C warming).

⁹³ See Table 5 *supra*.

⁹⁴ See Nordhaus and Boyer, *supra* note, at 80-92.

⁹⁵ For this argument in the more general context of tort and regulatory standards, see Eric A. Posner and Cass R. Sunstein, Dollars and Death, 72 U. Chi. L. Rev. 537, 583-84 (2005); as applied to climate change, see Lomborg, *supra*.

⁹⁶ This view is firmly rejected, however, in *Global Problems, Global Solutions*, *supra* note.

corrupt, and partly for that reason, ordinary development aid has not been very effective.⁹⁷ On the other hand, this form of redistribution does not, as we have stressed, help existing poor people at all; it can, at best, help poor people in future generations.

The point for present purposes is that in principle, redistribution through greenhouse gas cuts is most unlikely to be the best way to help poor people or poor nations. It is possible that the more direct methods are inferior, for example because it is not feasible to provide that direct aid; but this argument has not been made out.⁹⁸

C. Provisional Conclusions

As we have said, there are strong arguments, rooted in both welfarism and fairness, to support the view that rich countries should be making large lump-sum payments to poor ones. But rich countries are not now making such payments, and poor nations are not insisting on them as a matter of right.⁹⁹ As a normative matter, we believe that the best approach would be to separate the question of redistribution from that of appropriate climate change policy. There are strong arguments on behalf of a uniform carbon tax, one that would, in the relevant sense, treat rich and poor nations alike. There are also strong arguments on behalf of a worldwide cap-and-trade program, taking existing emissions rates as the starting point. What is puzzling is the claim that on distributive justice grounds, the best approach is for the United States to join an agreement that is not in its interest (recall the possibility that the optimal carbon tax for the world, assuming universal participation, is higher than the optimal carbon tax for the United States, again assuming universal participation).

We agree, however, that if the United States does spend a great deal on emissions reductions as part of an international agreement, and if the agreement does give particular help to disadvantaged people, considerations of distributive justice support its action, even if better redistributive mechanisms are imaginable. It is even possible that desirable redistribution is more likely to occur through climate change policy than otherwise, or to be accomplished more effectively through climate policy than through direct foreign aid. And we agree that if the United States is willing to bear a disproportionate share of the cost of greenhouse gas emissions, to reduce the harms faced above all in poor nations, disadvantaged people are likely to be benefited on balance.

Our only claims are that the aggressive emissions reductions on the part of the United States are not an especially effective method for transferring resources from wealthy people to poor people, and that if this is the goal, many alternative policies would be better. It should be clear that these claims apply broadly to efforts to invoke

⁹⁷ William Easterly, *The White Man's Burden* (2006).

⁹⁸ See *Global Problems, Global Solutions*, *supra* note.

⁹⁹ Rich nations do make small foreign aid contributions, much but not all of which appears to be designed to further specific foreign policy goals. See Alberto Alesina and David Dollar, *Who Gives Foreign Aid To Whom And Why*, 5 *J. Econ. Growth* 33 (2000). And although poor nations have sought various redistributive concessions in international agreements, they have for the most part failed to achieve them.

distributive justice to ask wealthy nations to participate in international agreements from which other nations might gain.

IV. Corrective Justice

Climate change differs from our asteroid example in another way. In the asteroid example, no one can be blamed for the appearance of the asteroid and the threat that it poses to India. But many people believe that by virtue of its past actions and policies, the United States, along with other developed nations, is particularly to blame for the problem of climate change.¹⁰⁰ In the international arena, the argument that the United States has an obligation to devote significant resources to reducing greenhouse gas emissions is not solely and perhaps not even mainly an argument about distributive justice. The argument also rests on moral intuitions about corrective justice – about wrongdoers and their victims.¹⁰¹

A. The Basic Argument

Corrective justice arguments are backward-looking, focused on wrongful behavior that occurred in the past.¹⁰² Corrective justice therefore requires us to look at stocks rather than flows. Even though China is now the world's leading greenhouse gas emitter, the United States has been the largest emitter historically, and thus has the greatest responsibility for the stock of greenhouse gases in the atmosphere. Of course, a disproportionate share of the stock of greenhouse gases can be attributed to other long-industrialized countries as well, such as Germany and Japan, and so what we say here about the United States can be applied, *mutatis mutandi*, to those other countries. The emphasis on the United States is warranted by the fact that the United States has contributed more to the existing stock than any other nation (nearly 30 percent).

In the context of climate change, the corrective justice argument is simply that the United States wrongfully harmed the rest of the world—especially, low-lying states and others that are most vulnerable to global warming—by emitting greenhouse gases in vast quantities. On a widespread view, corrective justice requires that the United States devote

¹⁰⁰ See e.g., Jiahua Pan, Common but Differentiated Commitments: A Practical Approach to Engaging Large Developing Emitters Under L20 (2004), available at <http://www.l20.org/libraryitem.php?libraryId=6>; Singer, *supra*.

¹⁰¹ We do not address whether there are *legal* challenges, specifically tort challenges, to greenhouse gas emissions. There is an extensive literature on this topic. See, e.g., Eduardo M. Penalver, Acts of God or Toxic Torts? Applying Tort Principles to the Problem of Climate Change, 38 Nat. Resources J. 563 (1998); David A. Grossman, Warming Up To a Not-So-Radical Idea: Tort-Based Climate Change Litigation, 28 Colum. J. Envtl. L. 1 (2003); James Salzman & David Hunter, Negligence in the Air: The Duty of Care in Climate Change Litigation, U Pa L Rev (forthcoming 2007). For a discussion of the possibility of tort claims brought under the Alien Tort Statute, see Posner, *supra*. However, the tort claim and the moral claim are overlapping, as we note, *infra*.

¹⁰² For this reason, corrective justice claims will not be appealing to welfarists, who tend to think that corrective justice is relevant, if at all, because it serves as a proxy for what welfarism requires. See Louis Kaplow and Steven Shavell, Fairness versus Welfare (2005). We tend to think that welfarists are generally correct here but bracket that point and the associated complexities for purposes of discussion.

significant resources to remedying the problem¹⁰³—perhaps by paying damages, perhaps by agreeing to extensive emissions reductions, and perhaps by participating in an agreement that is not in its self-interest. India, for example, might be thought to have a moral claim against the United States, one derived from the principles of corrective justice, and on this view the United States has an obligation to provide a compensatory remedy to India. (Because India is especially vulnerable to climate change,¹⁰⁴ we use that nation as a placeholder for those at particular risk.)

This argument enjoys a great deal of support in certain circles,¹⁰⁵ and seems intuitively correct. The apparent simplicity of the argument, however, masks some serious difficulties. We shall identify a large number of difficulties here, and the discussion will be lamentably complex. The most general point, summarizing the argument as a whole, is that the climate change problem poorly fits the corrective justice model, because the consequence of tort-like thinking would be to force many people who have not acted wrongfully to provide a remedy to many people who have not been victimized.

B. The Aggregation Problem

The United States is not a person, nor is India. Corrective justice is typically a matter between individuals, not entities. To see the problem, consider the recent International Court of Justice suit brought by Bosnia-Herzegovina against Serbia, charging Serbia with genocide during the Yugoslav civil war of the early 1990s.¹⁰⁶ Suppose that Bosnia-Herzegovina had won this case, and Serbia had been forced to pay reparations. No such entity called “Serbia” can pay out of its pocket; the reparations would be financed out of general revenues, paid for by taxes. Thus, the effect of the remedy would be to raise taxes or reduce government services for some or all Serbians, while benefiting some or all Bosnians through lower taxes, lump sum payments, or increased government services.

Can such an effect be justified? Possibly, but the point for present purposes is just that talk of corrective justice between states can be only a metaphor. States do not act; individuals act. States do not have mental states; individuals have mental states. To evaluate the moral considerations touching on claims between states, one needs to penetrate the veil of the state and consider the activities of the people who operate their governments and the people who are affected by their policies. Indeed, Bosnia’s claim was not based on any injury to “Bosnia”; it was based on an injury to Bosnians. If any state was a victim of the civil war, it was Yugoslavia, which was broken into pieces, and

¹⁰³ See, e.g., Daniel Farber, *Adapting to Climate Change: Who Should Pay*, U Pa L Rev (forthcoming 2007).

¹⁰⁴ See Nordhaus and Boyer, *supra* note, at 91.

¹⁰⁵ See note *supra*.

¹⁰⁶ *Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina v. Serbia and Montenegro)*, International Court of Justice, Judgment of Feb. 26, 2007 (available at: <http://www.icj-cij.org/docket/index.php?p1=3&p2=3&k=f4&case=91&code=bhy&p3=4>). The Court ultimately denied Bosnia a remedy.

yet no one thinks that “Yugoslavia” or some representative or successor has a claim against whoever was responsible for its dismemberment.

Thus, to evaluate India’s claim against the United States for wrongfully causing climate change, we must consider the actions of individuals, and the effects on individuals, and try to avoid referring to states qua states.

C. The Wrongdoer Identity Problem

The current stock of greenhouse gases in the atmosphere is due to the behavior of people living in the past. Much of it is due to the behavior of people who are dead. The basic problem for corrective justice is that dead wrongdoers cannot be punished or held responsible for their behavior, or forced to compensate those they have harmed. Holding Americans today responsible for the activities of their ancestors is not fair or reasonable on corrective justice grounds, at least not unless contemporary Americans can be said to have benefited from the actions of their ancestors (an issue to which we shall return).

Indeed, many Americans today do not support the current American energy policy, appear not to benefit from it, and already make some sacrifices to reduce the greenhouse gas emissions that result from their behavior. Holding these people responsible for the wrongful activities of people who lived in the past seems perverse. An approach that emphasized corrective justice would attempt to be more finely tuned, focusing on particular actors, rather than Americans as a class.

Consider again the Bosnia-Serbia conflict. Many people who are currently Serbian citizens had no role in planning the genocide and did not benefit from it; some of them opposed the nationalistic policies of Serbia at the time, at great personal risk. Many Serbians today were children or not born during the genocide, and others immigrated after the genocide (some as refugees escaping atrocities in Bosnia). And some people living in Serbia are victims of the genocide, or relatives of the victims, or victims of retaliation by Bosnians. Yet by holding Serbia liable for the genocide, one forces all these people to pay higher taxes. This violates moral intuitions against collective responsibility.¹⁰⁷

The most natural and best response to this point is to distinguish conflicts of this kind and to insist that all or most Americans today benefit from the greenhouse gas-emitting activities of Americans living in the past, and therefore it would not be wrong to require Americans today to pay for abatement measures. This argument is familiar from

¹⁰⁷ See, e.g., H.D. Lewis, *Collective Responsibility (A Critique)* in *Collective Responsibility: Five Decades of Debate in Theoretical and Applied Ethics* 17-34 (Larry May & Stacey Hoffman eds., 1991). In recent years, some philosophers have challenged traditional criticisms of collective responsibility, but these philosophers tend to ground collective responsibility in individual failures to act when action was possible and likely to be effective, and the person in question knew or should have known that she could have prevented the harm. See, e.g., Larry May, *Sharing Responsibility* (1992); cf. Brent Fisse & John Braithwaite, *Corporations, Crime and Accountability* 50 (1993); Christopher Kutz, *Complicity: Ethics and Law for a Collective Age* 166-253 (2000); David Copp, *Responsibility for Collective Inaction*, *J. Soc. Phil.*, Fall 1991, at 71.

debates about slave reparations, where it is argued that Americans today have benefited from the toil of slaves one hundred and fifty years ago.¹⁰⁸ To the extent that members of current generations have gained from past wrongdoing, it may well make sense to ask them to make compensation to those harmed as a result. On one view, compensation can work to restore the status quo ante, that is, to put members of different groups in the position that they would have occupied if the wrongdoing had not occurred.

However, this argument runs into serious problems. In the context of climate change, the initial difficulty is that the empirical basis of the argument is obscure. Many Americans today are, of course, immigrants or children of immigrants, and so not the descendants of greenhouse gas-emitting Americans of the past. It is possible that such people nonetheless benefit from past emissions, but perhaps they have received little or nothing from them. Further, not all Americans inherit the wealth of their ancestors, and even those who do would not necessarily have inherited less if their ancestors' generations had not engaged in the greenhouse gas-emitting activities.

From the standpoint of corrective justice, there is a more fundamental point. As long as the costs are being toted up, the benefits should be as well. Climate change is itself anticipated to produce benefits for many nations, both by increasing agricultural productivity and by reducing extremes of cold.¹⁰⁹ And if past generations of Americans have imposed costs on the rest of the world, they have also conferred substantial benefits. American industrial activity has produced products that were consumed in foreign countries, for example, and drove technological advances that other countries have benefited from. What would the world, or India, look like if the United States had engaged in 10 percent of its level of greenhouse gas emissions, or 20 percent, or 40 percent? For purposes of corrective justice, a proper accounting would seem to be necessary, and it presents formidable empirical and conceptual problems.

In the context of slave reparations, the analogous points have led to interminable debates, both empirical and conceptual, about historical causation.¹¹⁰ But-for causation arguments, used in standard legal analysis and conventional for purposes of conventional justice, present insuperable problems when applied historically. We can meaningfully ask whether an accident would have occurred if the driver had operated the vehicle more carefully, but conceptual and empirical questions make it impossible to answer the question whether white Americans today would have been worse off if there had been no slavery -- and impossible too to ask whether Indians would be better off today if Americans of prior generations had not emitted greenhouse gases. What kind of a question is that? In this hypothetical world of limited industrialization in the United States, India would be an entirely different country, and the rest of the world would be unrecognizably different as well.

¹⁰⁸ Stephen Kershner, *The Inheritance-Based Claim to Reparations*, 8 *Legal Theory* 243 (2002) (describing and criticizing these arguments). These arguments are often analogized to unjust enrichment arguments. See Eric A. Posner and Adrian Vermeule, *Reparations for Slavery and Other Historical Injustices*, 103 *Colum. L. Rev.* 689 (2003).

¹⁰⁹ See Nordhaus and Boyer, *supra* note; Lomborg, *supra* note.

¹¹⁰ See Posner & Vermeule, *supra*, at ____.

It is sometimes argued that because people take pride in the accomplishments of their nation, they should also take responsibility for its failures.¹¹¹ Americans who take pride in their country's contributions to prosperity and freedom should also take responsibility for its contributions to global warming. This argument, however, is weak. Many people are proud that they are attractive or intelligent, or can trace their ancestry to the Mayflower, or live in a city with a winning baseball team, but nothing about these psychological facts implies moral obligations of any sort. A person who is proud to be American, and in this way derives welfare from her association with other Americans who have accomplished great things, perhaps should be (and is) less proud than she would be if she were not also associated with Americans who have done bad things. She does not have any moral obligation, deriving from her patriotic pride, to set aright what other Americans have done wrong.

D. The Victim/Claimant Identity Problem

As usually understood, corrective justice requires an identity between the victim and the claimant: the person who is injured by the wrongdoer must be the same as the person who has a claim against the wrongdoer. In limited circumstances, a child or other dependent might inherit that claim, but usually one thinks of the dependent as having an independent claim, deriving from the wrongdoer's presumed knowledge that by harming the victim she also harms the victim's dependents.

Who are the victims of climate change? Most of them live in the future. Thus, their claims have not matured. To say that future Indians might have a valid claim against Americans today, or Americans of the past, is not the same as saying that Americans today have a duty to help Indians today—or even Indians in the future. To be sure, some people now living can be said to be victims of climate change.¹¹² People living in low-lying islands or coastal regions can plausibly contend that a particular flood or storm has some probabilistic relationship with climate change—but from the standpoint of corrective justice, this group presents its own difficulties (a point to which we will return shortly). For now, let us focus on the future victims.

Return once more to the Bosnia-Serbia conflict. If reparations had been awarded, the funds would presumably have gone into the general revenues of Bosnia. Yet many people living in Bosnia actually participated in the genocide on the Serbian side; others participated in atrocities directed at Serbians and ethnic Serbians in Bosnia. Many people living in Bosnia were born or came of age after the genocide, or immigrated after the genocide, and so were not directly harmed by it. And yet all these people would benefit from the reparations.

¹¹¹ Cf. Jacob T. Levy, *The Multiculturalism of Fear* 242-43 (2000). Levy argues that such people should feel shame about national failures, and not exactly that they have any moral obligations. However, the latter view seems to reflect many people's intuitions.

¹¹² See Stern, *supra* note.

From the perspective of corrective justice, these results are troublesome. Wrongdoers should compensate victims for their losses, and yet the crude state-to-state remediation scheme results in innocents being punished and non-victims being compensated. As we turn back to climate change, the problem is that the greenhouse-gas abatement remedy does not benefit current victims—those who are currently injured would gain absolutely nothing from reduced American emissions. If this point is not immediately intuitive, it is because states tend, wrongly, to be personified. Perhaps current victims should be compensated, to the extent that they can show that they have been harmed, if only probabilistically, by actions in the past. But who, exactly, are the wrongdoers who have injured them?

A successful abatement program would, of course, benefit many people living in the future, albeit by preventing them from becoming victims in the first place, or reducing the magnitude of their injury, rather than compensating them for harm. The moral basis of such a program is thus not corrective justice—not providing a remedy for a past harm—but simple welfarism. We have said that emissions reductions are justified on welfarist grounds, but that point does not suggest that past emitters have special obligations because of corrective justice.

E. The Causation Problem

Corrective justice requires that the wrongdoing cause the harm. In ordinary person-to-person encounters, this requirement is straightforward. But in the context of climate change, causation poses formidable challenges.

To see why, consider a village of India that is wiped out by a monsoon. One might make a plausible argument that the flooding was more likely than it would otherwise have been, as a result of rising sea levels caused by climate change. But it would be impossible to show that greenhouse gas emissions in the United States caused the flooding, or even contributed to it.¹¹³ If the flooding was in a probabilistic sense the result of greenhouse gas activities around the world, it was also the result of complex natural phenomena that are poorly understood. And to the extent that the United States was involved, much of the contribution was due to people who died many years ago; in all likelihood, little or none was due to people who engage in greenhouse gas activities today.

Causation problems are not fatal to corrective justice claims, but they significantly weaken them. In tort law, occasionally courts are willing to assign liability according to market share when multiple firms contribute to a harm—for example, pollution, or dangerous products whose provenance cannot be traced.¹¹⁴ But statistical relations are not

¹¹³ See R.A. Pielke et. al., *Hurricanes and Global Warming*, 86 *Bulletin of the American Meteorological Society* 1571 (2005) (discussing the uncertain connection between increased hurricane intensity and climate change).

¹¹⁴ See Michael Saks and Peter Blanck, *Justice Improved: The Unrecognized Benefits of Aggregation and Sampling in the Trial of Mass Torts*, 44 *Stan. L. Rev.* 815 (1992).

the same as causation, and at some point they become too weak to support a claim sounding in corrective justice. Such seems to be the case with climate change.¹¹⁵

F. The Culpability Problem

Philosophers disagree about whether corrective justice requires culpability.¹¹⁶ Frequently intentional, reckless, or negligent action is thought to be required for a corrective justice claim. While some people do support strict liability on corrective justice grounds, a degree of culpability is required to make the analysis tractable. Because multiple persons and actions (including those of the victim) are necessary for harm to have occurred, identification of the person who has “caused” the harm requires some kind of assignment of blame.¹¹⁷ At a minimum, the case for a remedy is stronger when a person acts culpably than innocently, and so it is worthwhile to inquire whether the United States or Americans can be blamed for contributing to climate change. Indeed, the notion that Americans have acted in a blameworthy fashion by contributing excessively to climate change is an important theme in popular debates.¹¹⁸

1. *Negligence in general.* The weakest standard of culpability is negligence: if one negligently injures someone, one owes her a remedy. Economists define negligence as the failure to take cost-justified precautions.¹¹⁹ Lawyers tend to appeal to community standards.¹²⁰

Today a scientific consensus holds that the planet is warming, and that this warming trend is a result of human activity.¹²¹ But this consensus took a long time to form. In the modern era, the earliest work on global warming occurred in the 1970s, and it was controversial.¹²² At a minimum, greenhouse gas emitting activities did not become

¹¹⁵ For more on the causation problem, see Eric A. Posner, *Climate Change and International Human Rights Litigation: A Critical Appraisal*, U. Pa. L. Rev. (forthcoming 2007).

¹¹⁶ Compare Jules Coleman, *Tort Law and the Demands of Corrective Justice*, 67 *Indiana L.J.* 349 (1992) (arguing that corrective justice requires a remedy even when the infringing conduct was innocent), and Ernest Weinrib, *Corrective Justice*, 77 *Iowa L. Rev.* 403 (1992) (taking the contrary view). For a very helpful discussion, see Stephen R. Perry, *Loss, Agency, and Responsibility for Outcomes: Three Conceptions of Corrective Justice*, in *Tort Theory* 24 (Ken Cooper-Stephenson & Elaine Gibson eds. 1993).

¹¹⁷ Matthew Adler, *Corrective Justice and Liability for Global Warming*, U. Pa. L. Rev. (forthcoming 2007).

¹¹⁸ See Singer, *supra* note.

¹¹⁹ See Richard A. Posner, *Economic Analysis of Law* 179-183 (5th ed. 1998).

¹²⁰ For simplicity, we will rely on the legal view. However, the legal standard does not, strictly speaking, require culpability. See A.P. Simester, *Can Negligence Be Culpable?*, in *Oxford Essays in Jurisprudence* 85, 87 (Jeremy Horder ed. 2000).

¹²¹ See, e.g., Stern, *supra* note; Nordhaus, *supra* note, at 10; IPCC, *supra* note. We refer to a scientific consensus, but there are dissenting voices. See, e.g., Nir Shaviv, *The Spiral Structure of the Milky Way, Cosmic Rays, and Ice Age Epochs on Earth*, 8 *New Astronomy* 39 (2003) (arguing that cosmic rays are responsible for most of recent variations in global temperatures); Nir Shaviv and J. Veizer, *Celestial driver of Phanerozoic climate?*, 13 *GSA Today*, 4 (2003). A reply is Stefan Rahmstorf et al., *Cosmic Rays, Carbon Dioxide and Climate*, in *Eos, Transactions of the American Geophysical Union* (January 27, 2004).

¹²² See Houghton, *supra* note.

negligent, under existing legal standards, until a scientific consensus formed and it became widely known among the public—a recent occurrence.¹²³

Even today, the argument that engaging in greenhouse-gas emitting activities is negligent seems weak. The scientific consensus does not answer the critical question, for the purpose of determining negligence, of how much any particular activity actually contributes to climate change. Indeed, a lively controversy exists about the overall costs and benefits of climate change in particular regions.¹²⁴ And if a large company in the New York emits a large volume of greenhouse gases, is it negligent? Suppose that the costs of emissions abatement would be significant; suppose too that the benefits of emissions abatement, in terms of diminished warming, would be effectively zero. We all understand what it means to drive a car negligently so as to put other drivers and pedestrians at risk, but the claim that driving a (nonhybrid?) car carefully is in fact negligent because of its impact on global warming, and the harm it causes to people living in India, remains dubious. Heating a house, driving a car, running a freezer, taking an airplane—are all these activities negligent? Even though the warming effects of the relevant emissions are essentially nil?

It would be possible to respond that, in fact, negligence has been pervasive. Although the harm caused by each of these activities in isolation is small, the cost of precaution is also often low. For example, Nordhaus calculates that the optimal carbon tax as of 2015 would be about \$35 per ton.¹²⁵ The calculation is based on the external cost of burning a ton of carbon as a consequence of greenhouse gas emissions. We calculate that this \$35 per ton figure translates to about an extra ten cents per gallon of gas.¹²⁶ Thus, using the economic theory of negligence as the failure to take cost-justified precautions, we could conclude that a person is negligent when she drives rather than walking, when the benefit she obtains from driving is less than ten cents per gallon consumed. The argument could be extended to the choice of driving rather than using convenient forms of public transportation, and to other activities as well.

Indeed, today, many people seem to be reducing their emissions on the basis of an assessment of roughly this kind. Those concerned about climate change do not seem to believe that they should stop engaging in activities that produce greenhouse gases; instead, they think that they should cut back on activities that generate unreasonable greenhouse gases in light of whatever benefits they produce. Some people go farther and purchase carbon offsets, but this type of activity seems, at present, supererogatory, whereas a case could be made today that a reasonable cutting back on greenhouse-gas emitting activities is morally required—that it represents an emerging community standard or norm.

¹²³ One commentator suggests 1990 as a date for when emitting activities could have become negligent. See Pan, *supra* note, at 3-7.

¹²⁴ See Lomborg, *supra* note.

¹²⁵ Nordhaus, *Stern Review*, *supra*, at 32.

¹²⁶ See Nordhaus, *The Challenge*, *supra* at 66; Emission Facts: Average Carbon Dioxide Emissions Resulting from Gasoline and Diesel Fuel (available at : <http://epa.gov/oms/climate/420f05001.htm>). The figures in the text are very rough and are used for illustration only: what we say would be true even if the numbers are higher or lower, as long as they are not zero.

Even if this is so, there is a significant problem with this argument, which is that the calculation given above assumes that everyone around the world is paying the carbon tax, and thus also cutting back on greenhouse-gas producing activities. If many or most people fail to pay the carbon tax, or (as we argue) fail to act as if they pay it by cutting back on less important greenhouse-gas producing activities, then the contribution of Americans who do this is close to nil. And if this is the case, it cannot be considered negligent for Americans to fail to engage in cutbacks of greenhouse-gas emitting activities. Put differently, it is not negligent to fail to contribute to a public good if not enough others are doing similarly, so that the public good would not be created even if one did contribute.¹²⁷ This is a “moral collective action problem,”¹²⁸ and however it should be assessed, the failure to act when other people are not acting does not seem to constitute negligence.

2. *Negligent government?* What about the U.S. government? Perhaps one could argue that U.S. climate change policy—which is to say not much in the way of policy¹²⁹—has been culpably negligent. The argument would be that, by failing to take precautions that would have cost the U.S. a lot but benefited the rest of the world much more, the U.S. government engaged in culpable behavior.

The problem with this argument is that, as we noted above, there is probably no action that the United States could have taken unilaterally that would have created benefits for the rest of the world greater than the cost to the United States. Unilateral reductions in greenhouse gas emissions would have little effect on overall climate change—not so far from zero even if aggressive and effective, and zero or very close to it if industry simply migrated to foreign countries. The Kyoto Protocol imposed no obligations on China, now the biggest emitter, and placed heavy burdens on the United States.¹³⁰ In this light, the claim that American policy has been negligent, under prevailing legal standards, is far-fetched.

Nothing that we have said is inconsistent with the view that American policy has been wrong or misdirected -- especially insofar as the United States has not sought to engage the world in reducing the problem.¹³¹ But it is not easy to say that the benefits of significant unilateral reductions would clearly exceed the costs.¹³²

3. *The government vs. the public.* Even if one could conclude that the U.S. government behaved negligently, it does not clearly follow that the American people

¹²⁷ Matthew Adler makes this point in criticizing Farber’s corrective justice argument (see Farber, *supra*). See Matthew Adler, *Corrective Justice and Liability for Global Warming*, unpub. m.s. 2007. However, we disagree with Adler’s argument that corrective justice can justify government-to-government claims for reasons given below.

¹²⁸ See *id.*

¹²⁹ For an overview, see Cass R. Sunstein, *Worst-Case Scenarios* (2007).

¹³⁰ See Nordhaus and Boyer, *supra* note.

¹³¹ A vigorous argument in favor of such engagement can be found in Stewart and Wiener, *supra* note.

¹³² See Cass R. Sunstein, *The Complex Climate Change Incentives of China and the United States* (unpublished manuscript 2007).

should be held responsible for their government's failures. The government itself does not have its own money to pay the remedy; it can only tax Americans. To justify such a tax, one would need to conclude that Americans behaved culpably by tolerating a government that failed to take actions that might have conferred benefits on the rest of the world of greater value than their costs.

There is a strong instinct to blame the public for the failures of their political system, but this instinct should be resisted. The last example of such a policy was the war guilt clause of the Versailles Treaty, which held Germany formally responsible for World War I, and required Germany to pay massive reparations to France and other countries. Germans resented this clause and conventional wisdom holds that their resentment fed the rise of Nazism. After World War II, the strategy shifted; rather than holding "Germany" responsible for World War II, the allies sought to hold the individuals responsible for German policy responsible—during trials held at Nuremberg and elsewhere, where defendants were given a chance to defend themselves. The shift from collective to individual responsibility was a major legacy of World War II, reflected today in the proliferation of international criminal tribunals that try individuals, not nations.

To be sure, no one is accusing the American government or its citizens of committing crimes. But the question remains whether Americans should be blamed, in corrective justice terms, for allowing their government to do so little about greenhouse gas emissions. It is one thing to blame individual Americans for excessive greenhouse-gas emissions; it is quite another to blame Americans for the failure of their government to adopt strict greenhouse-gas reduction policies. It is certainly plausible to think that voting for politicians who adopt bad policies, or failing to vote for politicians who adopt good policies, is not morally wrong except in extreme cases. Recall in this connection that even if Americans had demanded that their government act to reduce greenhouse gas emissions in the United States, the effect of unilateral reductions on climate change would be very small.

G. The Institutional Diversion Problem

Corrective justice requires that the wrongdoer make the victim whole; if that is not possible, at least some kind of payment or gesture or action (such as an apology) is required. Between persons, the requirement of remedy is straightforward. Between entities or states, there are serious complications.

The problem is that providing a remedy to a state almost always involves providing a remedy to a government, and a government may not use the benefit received in a manner that compensates the actual victims. Many governments are not democratic, and it is reasonable to assume that such governments do not act in a manner that advances the interest of the public as a whole, as opposed to the interests of a clique or group or tribe. Some other governments, even if democratic in name, are corrupt or ineffective.

Development aid is frequently siphoned off, and has generally had disappointing results.¹³³

Return once more to the example of Serbia and Bosnia. Bosnia is a deeply divided country, split three ways among groups that had been trying to kill each other just fifteen years ago—Bosniaks, Croats, and Serbs—and controlled by a weak government overseen by an ad hoc international agency.¹³⁴ It is possible but not particularly likely that if reparations had been paid by Serbia, they would have been used to benefit the victims of the genocide (mainly Bosnians).

The problem is admittedly less severe in the context of climate change, for one might argue that if the remedy for past greenhouse gas emissions is an obligation to engage in a significant abatement program, the danger of institutional diversion is nil. Citizens of poor nations benefit directly from the cutback on greenhouse gas emissions, and their government cannot siphon off any of these benefits. This point is powerful and may in the end be right, but there remain countervailing considerations. If citizens of a developing nation do benefit from the cutback of greenhouse gas emissions, then they will have more resources and their government can tax them more; and if the government is corrupt, it can squander the wealth. Even in the context of climate change, the institutional diversion problem cannot be entirely evaded.

G. Remedies and Rough Justice

The analogy to the Bosnia-Serbia conflict might seem misleading because the remedy in that case would have been a lump-sum transfer, whereas the remedy urged on the United States would be aggressive abatement of greenhouse gas-emitting activities, or payment of a large share of the cost of such abatement. An abatement program would incur costs today, but the benefits would be directed at the future, and would go directly to those people who would otherwise be harmed by climate change.

Put differently, we might think of the remedy in question as being analogous to an injunction as opposed to damages. When a factory generates pollution, a court might enjoin it from continuing to operate, and in this way provide a benefit to the future—preventing people from becoming victims in the first place. Despite its forward orientation, this type of activity seems consistent with norms of corrective justice, or perhaps we should just say justice in general. Rather than compensating victims of an injury, the agent in question refrains from imposing the injury in the first place.

On reflection, however, these points are less persuasive than they first appear, at least in the particular context of climate change. Recall that greenhouse gas abatement by the United States benefits no one at all unless other countries restrict emissions as well. So it cannot be the case that the United States has an absolute obligation to cut back on emissions. The analogy to a factory that emits pollution is a misleading one, as is the

¹³³ See, e.g., Easterly, *supra* note.

¹³⁴ See Anna Morawiec Mansfield, *Ethnic but Equal: The Quest for a New Democratic Order in Bosnia and Herzegovina*, 103 *Columbia L. Rev.* 2052, 2054 (2003).

analogy to a country that unjustly invades another. In these cases, a harm occurs independently of the actions of others. And if China and other large countries such as India refuse to cut emissions significantly, as seems likely for the foreseeable future, then even a treaty among developed countries is likely to have relatively little benefit.¹³⁵ Justice does not require an agent to curtail activity when doing so benefits no one else and is not wrongful on other grounds.

* * *

However appealing, corrective justice intuitions turn out to be a poor fit with the climate change problem—where the dispute is between nations, and where an extremely long period of time must elapse before the activity in question generates a harm. This is not to say that a corrective justice argument cannot be cobbled together and presented as the basis of a kind of rough justice in an imperfect world.¹³⁶ But such an argument would rely heavily on notions of collective responsibility that are not easy to defend or even to understand. Most of the attractiveness of the corrective justice argument derives, we suspect, from suppressed redistributive and welfarist assumptions, or from collectivist habits of thinking that do not survive scrutiny.

Here too, the argument has general implications. It is often tempting to invoke principles of corrective justice to ask one nation to compensate another. But especially when long periods of time have passed since the initial wrongdoing, the corrective justice argument runs into serious problems, and it is probably better to think in terms of redistribution or welfare.

V. Per Capita Emissions

We turn now to an especially pressing issue of climate change justice, one that is likely to play an increasing role in the next decade and beyond. Along with other developing nation, China has urged that the analysis ought to focus on a nation's per capita emissions, not its aggregate emissions.¹³⁷ This argument might even be connected with a general “right to development,” on the theory that a worldwide carbon tax (for example) would forbid poor nations from achieving the levels of development already attained by wealthy nations.¹³⁸ Perhaps an imaginable climate change agreement, one that would actually be effective and efficient, would violate the “right to development.”

¹³⁵ See *supra*.

¹³⁶ Cf. Adrian Vermeule, *Reparations As Rough Justice*, unpublished m.s. 2005 (available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=813086).

¹³⁷ See China's National Climate Change Programme, *supra* note, at 58.

¹³⁸ China has made just this argument. See Geoffrey York, Citing “Right To Development,” China Rejects Emission Cap, *Globe and Mail*, June 5, 2007, at A1. The UN General Assembly declared the existence of a right to development in 1986. See United Nations General Assembly, Declaration on the Right to Development, Resolution 41/128 (1986).

A. Facts

With respect to China, the factual predicate for this argument is that China's population is the largest on the planet, and notwithstanding its explosive emissions growth, its per capita emissions remain well below those of many nations. Consider the following:

Table 6
*Tons of CO2 Emitted Per Capita in 2004*¹³⁹

United States	19.73
Russia	10.63
Germany	10.29
Japan	9.52
United Kingdom	8.98
EU-25	8.46
Ukraine	6.42
France	6.22
China	3.66
India	1.02

China might well urge that its low per capita emissions rate – not only below that of the United States, but below such nations as Japan, India, Russia, Germany, the United Kingdom, and Ukraine as well – should be taken into account in deciding on appropriate policy. To clarify the claim, assume that the world consists of only two nations, one with two billion people and one with one million people. Suppose that the two nations have the same aggregate emissions rate. Would it make sense to say that the two should be allocated the same level of emissions rights, for purposes of a system of cap-and-trade? Intuition suggests not; and China therefore argues that all citizens should have a right to the same level of opportunity, which means that emissions rights should be allocated on a per-capita basis.¹⁴⁰

B. A Little Doublespeak? Of “Common But Differentiated Responsibilities”

China's argument for taking account of per-capita emissions is captured by its support for and understanding of the United Nations Framework Convention on Climate Change's principle of “common but differentiated responsibilities.”¹⁴¹ On the surface, this principle means that a nation's obligations on climate issues are to be determined by two factors: its responsibility for climate change and its capacity to cut emissions.¹⁴²

¹³⁹ Energy-related CO2 emissions only. See International Energy Agency, *supra* note, at II.49-II. 51.

¹⁴⁰ See Ying Chen and Jiahua Pan, *Equity Concerns over Climate Change Mitigation* (Chinese Academy of Social Sciences, Global Change and Economic Development Program Working Paper No. 002).

¹⁴¹ China's National Climate Change Programme, *supra* note, at 58.

¹⁴² See Pan, *supra* note, at 3-4; Stone, *supra*

Beneath the surface, the principle means that the developed nations have to spend a great deal to reduce their emissions, while the developing nations do not.

Invoking this principle, Chinese officials have called on developed countries to take the lead in cutting their emissions, and have argued that developing countries such as China are bound only to take account of environmental issues as they continue to ensure that their economies grow.¹⁴³ Chinese officials insist that raising the standard of living for their citizens is their first priority.¹⁴⁴ With this point in mind, China has emphasized that any actions it takes in regard to climate change will be “within its capability based on its actual situation.”¹⁴⁵

China further argues that developed countries have an obligation to assist the developing world with the challenges of climate change, both through technology transfer to allow sustainable development and also through financial assistance for adaptation to the effects of global warming.¹⁴⁶ This moral obligation, China argues, arises because the developed world bears the greatest share of responsibility for climate change.¹⁴⁷ Since developed countries appropriated more than their share of “climate resources” in the past, they should now use their wealth to help poor countries develop in a world where warmer climates are a serious threat.¹⁴⁸

C. A (Mildly) Disguised Claim for Cross-National Redistribution

Some of these arguments have considerable intuitive appeal. But to the extent that China’s claim is that emissions rights should be allocated on a per capita basis, China is asking for massive redistribution from the developed nations, above all the United States, to the developing nations, above all China, and it is most puzzling to suggest that the redistribution should occur in the context of climate change policy.

To see the point, we need to distinguish between greenhouse gas taxes and cap-and-trade program. A uniform greenhouse gas tax has a great deal to recommend it¹⁴⁹; and if the tax is uniform, nations and their citizens will in an important sense be treated the same, regardless of their per capita rates. Would it make any sense to suggest that the tax should be (say) \$10 per ton in developing nations, and \$1 in nations with low per capita emissions rates? Such a tax scheme would have some distributive benefits, to be sure; but for reasons that we have explored, it would be better to produce those benefits directly.

¹⁴³ Liu Jiang, Vice-Chairman, National Development and Reform Commission of China, Keynote Speech on the Round Table Meeting of Energy and Environment Ministers from Twenty Nations (2005) (available <http://www.ccchina.gov.cn/en/>)

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ See *id.*; China’s National Climate Change Programme, *supra* note, at 60-61.

¹⁴⁷ See *id.* at 2.

¹⁴⁸ See Chen and Pan, *supra* note, at 5-6.

¹⁴⁹ Nordhaus, *supra* note, at 11.

Now turn to cap-and-trade programs. A large challenge for such programs is to decide on the initial allocation of entitlements. An obvious possibility would be to say that all of the major emitters must reduce their emissions by a stated amount from a specified date – by, say, 10% from 1995. Analytically, this approach would be similar to a tax in terms of its distributional consequences; both take existing emissions rates as the starting point. An alternative possibility, based on per capita rates, would be to say that each nation has a right to emit a specified amount per person. On this approach, United States (with 300 million people) would have less than 30 percent of the emissions rights of India and China (each of which has over one billion people). Such an approach would represent a massive transfer of resources from the United States to other nations – indeed, the transfer would be worth hundreds of billions of dollars.

There is no sign that the United States wants to give hundreds of billions of dollars to China or India. Indeed, any proposal that it should do so, in general or in the context of climate change, would be widely unpopular to say the least; domestic political constraints would probably doom any such proposal. And if the United States does decide to give hundreds of billions of dollars to poor nations, why should the gift take the form of emissions rights?

One answer is that the gift would represent a side-payment, designed to ensure that developing nations, above all China, participate in the deal. Such an approach would be very similar to what happened in connection with the Kyoto Protocol, where Russia and Eastern Europe were given side-payments, in the form of emissions rights worth over one hundred billion dollars.¹⁵⁰ (One hundred billion dollars, by the way, is about one-third the total cost of the Kyoto Protocol to the United States, had the United States agreed to the emissions reductions requirements.¹⁵¹) That particular side-payment was understandable, especially for Russia; recall that on prominent projections, Russia would be a net gainer from climate change.¹⁵² The question is whether the United States, which has comparatively less to lose from climate change, is willing to give poor countries large sums of money as part of a climate change agreement. It is far more likely that the United States would say: *We would like to be subsidized, not punished, for our willingness to enter into an agreement that does not appear to be in our interest.*

There are other problems with the proposal for per capita emissions rights. China's population grew by about eight million people in 2006; the United States' population grew by about three million that same year.¹⁵³ If China's proposal were in place, then presumably China's entitlement would increase relative to America's. Many if not most of China's new inhabitants would produce very little in the way of greenhouse gas: they will be poor farmers tilling the fields. Thus, the increase in entitlements would be enjoyed by China's relatively wealthy urban population.

¹⁵⁰ Nordhaus and Boyer, *supra* note.

¹⁵¹ *Id.*

¹⁵² See *id.* at 191.

¹⁵³ U.S. Census Bureau International Data Base (IDB), available at <http://www.census.gov/ipc/www/idb>.

At the same time, countries would be given an incentive—or at least no disincentive—to increase their populations. Perhaps it would be better if governments took account of greenhouse gas effects when determining population policy. In any event, a sensible climate control agreement would require countries to pay for their greenhouse gas emissions regardless of how large or small their populations. If China demands or deserves a side payment, that is a separate question, not to be confounded by reference to per capita emissions rights. As we have seen, developing nations, including China, were given a set of side-payments in connection with the Montreal Protocol, and China may well demand such payments in the context of climate change.¹⁵⁴

A few final points should be stressed about practicalities and politics. If China must be paid to reduce greenhouse gas emissions, then probably most of the developing world will also have to be paid to reduce greenhouse gas emissions. This step would significantly increase the effective carbon tax that would be paid by developed countries. It would also be necessary to obtain a commitment from the payees that they not further develop greenhouse-gas emitting industries just to increase their bargaining power for future renegotiations—and this could be extremely difficult. And if the United States refuses to pay more than the carbon tax than is optimal for it, and thus underpays relative to the global optimum, then we could face a situation where other rich nations (and not inconceivably even poor nations) could offer to pay the United States to reduce its greenhouse gas emissions—at the least, an offer that would be politically delicate.

Conclusion

It is increasingly clear that an international agreement to control climate change would be in the world's interest.¹⁵⁵ Either a worldwide carbon tax¹⁵⁶ or some kind of cap-and-trade program¹⁵⁷ would be suitable for the purpose. But the agreement that is optimal for the world may not be optimal for the United States, which would have to bear a large burden for significant emissions reductions and which is not among the nations most gravely threatened by climate change. In addition, there are important questions about how to distribute the costs of emissions reductions. Many people believe that because the United States is wealthy, and because it has contributed a great deal to the existing stock of emissions, it should bear a large share of the cost. As we have seen, the United States would have borne the lion's share of the cost of the Kyoto Protocol, if it had agreed to the relevant emissions restrictions; indeed, the cost to the United States might have been as high as 80 percent of the total cost.¹⁵⁸

The distributive argument must be separated from the corrective justice argument. If the United States wants to use its wealth to help to protect India and Africa or the

¹⁵⁴ See Olmstead and Stavins, *supra* note.

¹⁵⁵ The best discussion is Nordhaus, *supra* note.

¹⁵⁶ A carbon tax is vigorously defended in *id.*

¹⁵⁷ A cap-and-trade program is vigorously defended in Stewart and Wiener, *supra* note, at 65-79.

¹⁵⁸ See *id.* at 10. Nordhaus estimates that the United States would have borne about two-thirds of the cost. See William Nordhaus, *After Kyoto: Alternative Mechanisms to Control Global Warming* 24 (2002), available at http://www.econ.yale.edu/~nordhaus/homepage/PostKyoto_v4.pdf

world from climate change, there can be no reason for complaint – just as there could be no reason for complaint if the United States used its wealth to help to protect India and Africa or some other region from an asteroid or a tsunami. It is far from clear, however, that greenhouse gas restrictions on the part of the United States are the best way to help the most disadvantaged citizens of the world.¹⁵⁹

Many people are treating climate change as a kind of tort, committed by the United States against those who are most vulnerable.¹⁶⁰ But we have seen that principles of corrective justice have an awkward relationship to the problem of climate change. Many of the relevant actors are long dead, and a general transfer from the United States to those in places especially threatened by climate change is not an apt way of restoring some imagined status quo. In this context, the idea of corrective justice is a metaphor, and a highly imperfect one.

We have not attempted here to devise any particular program for dealing with greenhouse gas emissions.¹⁶¹ If the United States agrees to participate in a climate change agreement on terms that are not in the nation's interest, but that help the world as a whole, there would be no reason for complaint, certainly if such participation is more helpful to poor nations than conventional foreign-aid alternative. Compared to continued inaction, participation on those terms would be entirely commendable. But the commendation should not be muddied by resort to crude and unhelpful arguments from distributive and corrective justice. Our goal here has been to clarify the uses and limits of those arguments, in a way that bears not only on climate change, but also on a wide range of other questions raised when some nations make claims on others.

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¹⁵⁹ See various contributions to *Global Problems, Global Solutions*, supra note.

¹⁶⁰ See note supra.

¹⁶¹ Sensible approaches can be found in Stewart and Wiener, supra note, and Nordhaus, supra note.

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348. Eric A. Posner and Adrian Vermeule, Constitutional Showdowns (July 2007)
349. Lior Jacob Strahilevitz, Privacy versus Antidiscrimination (July 2007)
350. Bernard E. Harcourt, A Reader's Companion to *Against Prediction*: A Reply to Ariela Gross, Yoram Margalioth, and Yoav Sapir on Economic Modeling, Selective Incapacitation, Governmentality, and Race (July 2007)
351. Lior Jacob Strahilevitz, "Don't Try This at Home": Posner as Political Economist (July 2007)
352. Cass R. Sunstein, The Complex Climate Change Incentives of China and the United States (August 2007)
353. David S. Abrams and Marianne Bertrand, Do Judges Vary in Their Treatment of Race? (August 2007)
354. Eric A. Posner and Cass R. Sunstein, Climate Change Justice (August 2007)



PUBLIC INTEREST ENVIRONMENTAL LITIGATION IN INDIA: EXPLORING ISSUES OF ACCESS, PARTICIPATION, EQUITY, EFFECTIVENESS AND SUSTAINABILITY

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1. Introduction

In a system in which policy-makers and law-enforcers are perceived as apathetic, if not corrupt, and politicians are perceived as opportunistic demagogues rather than as visionary leaders, the Supreme Court of India has assumed the mantle of a ‘Supreme Court for Indians’¹ and a ‘last resort for the oppressed and bewildered’.² In the past three decades, the Court³ has opened its doors to public-spirited citizens,⁴ expanded the frontiers of fundamental rights,⁵ and even ‘rewritten parts

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¹ U Baxi, ‘The Avatars of Indian Judicial Activism: Explorations in the Geography of (In)justice in SK Verma and Kusum (eds), *Fifty Years of the Supreme Court of India: Its Grasp and Reach*, (OUP, New Delhi 2000) at 156, 157, Oxford University Press, New Delhi.

² *State of Rajasthan v Union of India* (1979) 3 SCC 634, 670 (per Goswami J.)

³ All instances of the term ‘the Court’ refer to the Supreme Court of India.

⁴ A few activist judges in the late 1970s and early 1980s, in a series of high profile cases bristling with procedural innovations and doctrinal creativity, laid the groundwork for the growth of public interest litigation in India. The most significant of these cases is *S.P. Gupta v Union of India* in which Justice Bhagwati relaxed the rule of *locus standi*, and opened up the doors of the Supreme Court to public-spirited citizens—both those wishing to espouse the cause of the poor and oppressed (representative standing) and those wishing to enforce performance of public duties (citizen standing). See *S.P. Gupta v Union of India*, (1981) Supp SCC 87, 233. Public interest litigation in India can be pursued either in the High Court or Supreme Court. If the complaint is of a legal wrong, Art 226 of the Constitution permits recourse to the High Court of the State. If the complaint alleges a violation of fundamental rights, Art 32 of the Constitution permits direct recourse to the Supreme Court.

⁵ The fundamental right most often invoked by petitioners is contained in Art. 21 which reads: ‘No person shall be deprived of his life or personal liberty except according to procedure established by law’. The Constitution of India, 1950.

Article 21 has been read to include the right to livelihood (*Olga Tellis v Bombay Municipal Corporation* (1985) 3 SCC 545); ‘the right to live with human dignity and all that goes along with it, namely, the bare necessities of life such as adequate nutrition, clothing, shelter over the head and facilities for reading, writing and expressing oneself in diverse forms, freely moving about and mixing and commingling with

of the Constitution'.⁶ The Court has transformed itself, through the exercise of its public interest jurisdiction, into an arena in which political, social and economic battles are fought, and socio-economic justice is delivered.⁷

The power of public interest litigation (PIL) in India lies in its freedom from the constraints of traditional judicial proceedings. PILs in India have come to be characterised by a collaborative approach, procedural flexibility, judicially supervised interim orders and forward-looking relief. Judges in their activist avatar reach out to numerous parties and stake-holders, form fact-finding, monitoring or policy-evolution committees, and arrive at constructive solutions to the problems flagged for their attention by public-spirited citizens. Judges have tremendous power, in particular in PILs, to design innovative solutions, direct policy changes, catalyse law-making, reprimand officials and enforce orders. And, they are not hesitant to exercise this power in what they perceive as the public interest. Where there is a perceived 'vacuum in governance, the Court rushes to fill it'.⁸

Although Justice Bhagwati, the doyen of the activist judges in the late 1970s and early 1980s, developed public interest jurisdiction for the benefit of persons who by virtue of their 'socially or economically disadvantaged position are unable to approach the court for relief',⁹ in the last 15 years the judicial gaze has zeroed in on the protection of the environment. The constitutionally-protected fundamental right to life and liberty¹⁰ has been extended through judicial creativity to cover unarticulated but implicit rights such as the right to a wholesome environment, that is, 'right of enjoyment of pollution-free water and air'.¹¹ This right was recognised as part of the right to life in 1991, and in seven short years the Court had been faced with so many public interest environmental cases that it was moved to note, '[a]t this point of time, the effect of the quality of the environment on the life of the inhabitants is much too obvious to require any emphasis or elaboration'.¹² The Court has since fleshed out the right to a wholesome environment by integrating into Indian environmental jurisprudence not just established but even nascent principles of international environmental law.¹³ These include the polluter

fellow human beings'. (*Francis Coralie Mullin v The Administrator, Union Territory of Delhi* (1981) 1 SCC 608); the right to health and medical care of workers (*Consumer Education and Research Centre v Union of India* (1995) 3 SCC 42); and, the right to education (*Mohini Jain v State of Karnataka* (1992) 3 SCC 666 and *J.P. Unni Krishnan v State of Andhra Pradesh*, (1993) 1 SCC 645) much before the introduction of Art. 21A guaranteeing free and compulsory education for all children between the ages of 6 and 14 (Constitutional Amendment, Eighty-sixth Amendment Act, 2002).

⁶ PN Bhagwati, 'Judicial activism and public interest litigation' (1985) 23 Colum. J. Trans. L 561, 567.

⁷ K Chandrasekharan Pillai, 'Role of Teachers and Students of law in Public Interest Litigation', (1984) 8 CULR 503.

⁸ M Rajamani, Ministry of Urban Development, B Lal, Chair, Environment Pollution (Prevention and Control) Authority and BL Wadehra, Senior Advocate, Supreme Court of India, in discussion with the author, Delhi, 23, 9 and 17 September 2004, respectively.

⁹ See supra n 4.

¹⁰ Article 21, The Constitution of India, 1950.

¹¹ *Subash Kumar v State of Bihar* (1991) 1 SCC 598. See also *Virender Gaur v State of Haryana* (1995) 2 SCC 577 and *M.C. Mehta v Union of India* (Delhi Stone Crushing Case) (1992) 3 SCC 256 at 257.

¹² *M.C. Mehta v Union of India* (Delhi Vehicular Pollution Case) (1998) 9 SCC 589, 590.

¹³ Including Principles 3 (Inter-generational Equity), 4 (Sustainable Development), 15 (Precautionary Approach), and 16 (Polluter Pays), Rio Declaration on Environment and Development, 1992.

pays principle,¹⁴ the precautionary principle¹⁵ the principle of inter-generational equity,¹⁶ the principle of sustainable development¹⁷ and the notion of the state as a trustee of all natural resources.¹⁸

The Court, at the behest of public spirited individuals, has passed (and continues to pass) orders *inter alia* to protect the Taj Mahal from corrosive air pollution,¹⁹ rid the River Ganges of trade effluents,²⁰ address the air pollution in Delhi and other metropolitan cities,²¹ protect the forests and wildlife of India,²² and clear the cities of their garbage.²³ These cases represent a small, albeit significant, minority of the dozens of public interest environmental cases that reach the portals of the Indian Courts. Indeed it could be argued that few areas of environmental governance in India are today free from judicial oversight.

This expansive judicial role in governance has been welcomed in some quarters as 'chemotherapy for the carcinogenic body politic'.²⁴ The ability of public-spirited individuals to use the Court as a fulcrum to leverage public policy is perceived as a testament to the Indian democracy.²⁵ Judicial intervention has led to changes in policy as well as rules, and arguably, to discernible improvements in the environment.

Although the Court has done and continues to do exemplary work, the exercise of public interest environmental jurisdiction raises concerns with respect to access,

¹⁴ *Indian Council for Enviro-legal Action v Union of India (Bichhri Case)* (1996) 3 SCC 212; See also *M.C. Mehta v Kamal Nath*, (2000) 6 SCC 213, 220.

¹⁵ *Vellore Citizens' Welfare Forum v Union of India* (1996) 5 SCC 647. See also *Narmada Bachao Andolan v Union of India* (2000) 10 SCC 664, 727. The Court in this case went as far as to shift the burden of proof to the industry, a controversial and questionable extension in environmental law. See generally C. Sunstein, *Beyond the Precautionary Principle*, University of Chicago Legal Theory and Public Law Working Paper No. 38(2003). Available at: <<http://www.law.uchicago.edu/academics/publiclaw/>>.

¹⁶ *State of Himachal Pradesh v Ganesh Wood Products* (1995) 6 SCC 363; See also *Indian Council for Enviro-legal Action v Union of India* (CRZ Notification case), (1996) 5 SCC 281.

¹⁷ *M.C. Mehta v Union of India (Taj Trapezium Case)* (1997) 2 SCC 353, 381; See also *Narmada Bachao Andolan v Union of India* (2000) 10 SCC 664, 727.

¹⁸ *M.C. Mehta v Kamal Nath* (1997) 1 SCC 288.

¹⁹ The Court, in a series of directives spanning over two decades, responded by banning coal-based industries in the Taj's immediate vicinity, closing 230 other factories, requiring 300 factories to install pollution control devices, and ordering the creation of a traffic bypass and a tree belt to insulate the Taj. *M.C. Mehta v Union of India (Taj Trapezium Case)*, Writ Petition Number 13381 of 1984.

²⁰ *M.C. Mehta v Union of India (Ganga Pollution Case)*, Writ Petition Number 3727 of 1985.

²¹ Including by mandating conversion of Delhi's public transport system from conventional fuel to Compressed Natural Gas. *M.C. Mehta v Union of India (Delhi Vehicular Pollution Case)* Writ Petition Number 13029 of 1985, and ordering the closure and/or relocation of hazardous and noxious industries operating within Delhi, *M.C. Mehta v Union of India (Delhi Industrial Relocation Case)* Writ Petition Number 4677 of 1985.

²² In *T.N. Godavarman Thirumulkpad v Union of India and Ors* Writ Petition Number 202 of 1995, the Court has undertaken the mammoth task of protecting the forests and wildlife of India. It has passed numerous significant orders including *inter alia*: that no forests, national park or wildlife sanctuary can be de-reserved without its explicit permission; and no non-forestry activity will be permitted in a national park or wildlife sanctuary even if prior approval under the Forest (Conservation) Act, 1980 has been obtained. It has also imposed complete bans on the movement of cut trees and timber from the seven North-Eastern States, and on felling of trees in 'any forest, public or private' in Jammu & Kashmir, Himachal Pradesh, and the hill regions of Uttar Pradesh, and West Bengal.

²³ *Almitra Patel v Union of India* Writ Petition Number 888 of 1996.

²⁴ U Baxi, 'Preface' in SP Sathé (ed.), *Judicial Activism in India* (2nd edn, OUP, New Delhi 2002), Oxford University Press, New Delhi.

²⁵ A Patel, Petitioner and Member, Asim Barman Committee, in discussion with the author, Bangalore, 13 September 2004 and Delhi, 6 February 2007.

participation, effectiveness and sustainability, concerns which need to be explored and addressed if the true promise of public interest jurisdiction is to be unleashed. This article seeks to delineate and explore these concerns. In order to do so effectively, this article, uses as its prism, two high profile public interest environmental cases²⁶—*M.C. Mehta v Union of India (Delhi Vehicular Pollution Case)*²⁷ and *Almitra Patel v Union of India (Municipal Solid Waste Management Case)*²⁸. The first part of this article tells the stories, as they developed, of the chosen case studies in the Supreme Court of India. It lays out the issues considered and resolved by the Court, the political environment in which these cases were litigated, and the outcomes of the cases to date. The second part of the article assesses the outcomes of the two cases against the following benchmarks: participation (how participatory was the process that led to the outcome?); equity (how equitable were the outcomes); effectiveness (how effective were the outcomes?); and sustainability (how durable were the solutions devised?).

In addition to doctrinal research, this article is based on personal interviews and written communications with numerous individuals and organisations including, *inter alia*: the petitioners and key respondents in the chosen cases; selected members of the relevant Supreme Court committees; campaigning and research organisation who influenced the outcome of the chosen PILs; campaigning, research and funding organisations who were influenced by the outcome of the chosen PILs; and career public interest litigators.²⁹

2. The Case Studies

2.1 The Municipal Solid Waste Management Case

The petitioner, A Patel, after two successful ‘Clean India Campaigns,’ which she took to over 30 cities in 1994 and from ‘Kashmir to Kanyakumari’ in 1995, filed a petition before the Court in 1996 for a violation of Article 21, the right to life and a healthy environment. The petition noted that ‘faulty and deficient’ garbage disposal practices are in vogue in urban centres through the country. It claimed *inter alia*, that 20–80% of garbage remains uncollected and of the garbage that is

²⁶ These cases are illustrative rather than exhaustive of the kinds of issues raised by public interest litigations. They were selected for *inter alia*: their impact—both real (on various actors, and in terms of tangible outcomes), and perceived (in terms of noticeable improvements in solid waste management practices and the air quality in Delhi); for the length of time they had spent in the dockets of the Court (over 22 and 11 years, respectively); for their urban focus; and the strength of the mobilization efforts in waste management and vehicular pollution sectors. In truth any number of cases would have served the purpose of this paper, which is to cast a critical gaze on public interest litigations with the insights that the prime movers and shakers in a case—the petitioners, respondents and other stake holders—may be able to offer. Practical concerns such as the accessibility of the primary actors also played a part in the choice of the case studies.

²⁷ Writ Petition Number 13029 of 1985. A series of orders, directions and judgments were delivered by the Court in the period between 1985 and 2007.

²⁸ Writ Petition Number 888 of 1996. A series of orders, directions and judgments were delivered by the Court in the period between 1996 and 2007.

²⁹ The majority of the interviews were conducted in 2004 and 2005, but additional views were canvassed, and earlier views confirmed in 2007.

collected at least 100,000 tons is thrown along roads, waterways and wetlands just outside the city limits of India's 300 odd Class I towns and cities. The petition argued that the respondents, various government agencies, had neglected to discharge their constitutional and statutory obligations in relation to the proper collection, handling, transportation and hygienic ultimate disposal or recycling of municipal solid waste (MSW). The petitioners sought writs of mandamus against various respondents asking them *inter alia* to discontinue open dumping, identify waste processing and disposal sites, and take other appropriate steps for the collection, storage, transportation, hygienic disposal, treatment and recycling of MSW.

The Court, the petitioner and the Union of India (UOI) counsel agreed on the need for setting up a Committee. The Court was particular that both the Ministry of Urban Development (MOUD) and the Ministry of Environment and Forests (MOEF) should be involved.³⁰ The petitioner, in consultation with the UOI counsel, drafted a list of Municipal Commissioners for the Committee, as well as the terms of reference. The Court constituted the Committee, headed by Asim Barman. The Committee prepared its Interim Report in six months, and presented it to 400 city officials at four regional workshops.³¹ The comments of city officials were included in the Final Report submitted to the Court in March 1999.³² In 2000 the Court directed all statutory authorities to 'endeavour to comply with the suggestions and directions contained in the report prepared by the Asim Barman Committee'.³³ The MOEF notified the Municipal Solid Waste (Management and Handling) Rules (MSW Rules) on 3 October 2000.³⁴ The MSW Rules are in conformity with the Asim Barman Committee Report.³⁵ Schedule I of the Rules contains an Implementation Schedule. It requires the setting up of waste processing and disposal facilities by 31 December 2003, improvement of existing landfill sites by 31 December 2001 and identification of landfill sites for future use by 31 December 2002.

After the submission of the Report and the notification of the MSW Rules, the Bench turned the spotlight on the four Metropolitan cities, and Bangalore, and directed the Commissioners of these cities to respond to the recommendations of the Asim Barman Committee Report.³⁶ The Judge also highlighted the problem caused by solid waste generated by slums [also known as JJ (Jhuggi-Jhopuri) clusters]. He noted that slums 'had multiplied in the last few years by geometric proportion',³⁷ and directed the DDA to explain how 700 JJ clusters had appeared on their land.³⁸ The petitioner, in order to shift the focus back to MWW management, sought the Court's help in implementing the MSW Rules and the

³⁰ Order dated 07/01/1998.

³¹ Order dated 20/07/1998.

³² Order dated 11/01/1999. See Solid Waste Management in Class I Cities in India, Report of the Committee Constituted by the Hon. Supreme Court of India, March 1999.

³³ Order dated 15/02/2000.

³⁴ Municipal Solid Waste (Management and Handling Rules), 1999. Available at the website of the Ministry of Environment and Forests, Government of India: <<http://envfor.nic.in>>

³⁵ See *ibid* Schedule II.

³⁶ Order dated 24/11/1999.

³⁷ Order dated 15/02/2000.

³⁸ Order dated 24/08/2000.

recommendations of the Asim Barman Committee Report. The Court is currently engaged in this task.

2.2 The Delhi Vehicular Pollution Case

In 1985, amidst reports that Delhi had the dubious distinction of being the fourth most polluted city in the world, litigator MC Mehta after a careful investigation of the issue, including with the help of the National Environmental Engineering Research Institute (NEERI),³⁹ filed a PIL in the Supreme Court India drawing the Court's attention to air pollution and its serious health impacts, in particular on children. He also drew the Court's attention to the chaotic traffic conditions in Delhi, and their impact on the bodily integrity of the citizens of Delhi. He argued that the existing environmental laws obliged the government to take steps to reduce Delhi's air pollution in the interests of public health. MC Mehta had also filed a writ petition seeking the relocation of hazardous and noxious industries operating within the National Capital Territory (NCT) in contravention of the Delhi Master Plan. These two cases were together aimed at easing the air pollution in Delhi.⁴⁰

In the initial years of the litigation, the Court took steps to ensure it had the relevant information before it. It, *inter alia* directed the MOEF to set up a committee chaired by Justice Sakia to assess technologies world-wide, available technologies in India and recommend 'low cost alternatives for operating vehicles at reduced pollution levels in the metropolitan cities of India'.⁴¹ The Sakia Committee recommended the introduction of low-lead and unleaded fuel combined with catalytic converters.⁴² It also suggested Compressed Natural Gas (CNG) as an alternative vehicular fuel on the basis that it was less polluting, cheaper and more widely available in the country than petrol or diesel.⁴³ In response the Court ordered the UOI to: supply low-lead petrol⁴⁴ in the four metros by December 1994 and in the entire country by December 1996; and to supply unleaded petrol⁴⁵ in the four metros by April 1995 and in the entire country by April 2000.⁴⁶ It also directed the MOEF to take steps to convert all government vehicles registered prior to April 1995 to CNG.⁴⁷ While the phase-out of leaded petrol proceeded smoothly, albeit under the judicial gaze,⁴⁸ the early experiments with CNG failed to take off.

The second and more high-profile phase of this PIL started, arguably, with the 'Right to Clean Air Campaign' waged by the Centre for Science and Environment

³⁹ See generally <<http://www.neeri.nic.in/>>.

⁴⁰ *M.C. Mehta v Union of India (Delhi Industrial Relocation Case)* Writ Petition Number 4677 of 1985.

⁴¹ Order dated 14/03/1991.

⁴² Saikia Committee, 4th Bi-Monthly Report, 1991.

⁴³ See RG Bell et al, 'Cleaning up Delhi's Air: how Delhi broke the logjam on air quality reforms', (2004) 46 *Environment* 23, 29.

⁴⁴ Low-lead petrol=petrol with lead content equal to or less than 0.15 g/l.

⁴⁵ Unleaded petrol=petrol with a lead content of less than 0.013 g/l.

⁴⁶ Order dated 29/10/1994.

⁴⁷ Order dated 28/03/1995.

⁴⁸ Orders dated 14/02/1996, 09/05/1996 and 07/10/1996.

(CSE), Delhi,⁴⁹ an environmental advocacy group known for its 'knowledge-based activism' and confrontational style. In November 1996 CSE published the provocatively titled monograph, 'Slow Murder: The Deadly Story of Vehicular Pollution in India',⁵⁰ based *inter alia* on statistics from a World Bank Study which estimated that the costs of ambient air pollution in Delhi alone is US \$ 100–400 million.⁵¹ It presented estimates that 2,000 metric tons of pollutants are released into the atmosphere everyday, with vehicular pollution accounting for 64% of the total pollution load of Delhi.⁵² Later in the same month, Justice Kuldeep Singh issued a *suo moto* notice to the Delhi government to submit an action plan for controlling the city's vehicular pollution problem.⁵³ There is some dispute as to the motivation for the Court's *suo moto* notice. While CSE believes the notice to be a direct reaction to the media publicity accompanying the release of 'Slow Murder',⁵⁴ members of the judiciary believe that this notice was issued entirely at the Court's initiative.⁵⁵ Be that as it may, the Court's notice in this instance resulted in the preparation of comprehensive plans by the Delhi and Union governments, and a subsequent notice⁵⁶ resulted in the MOEF's 'White Paper on Pollution in Delhi with an action plan'.⁵⁷

The judiciary authorised the establishment of the Environment Pollution (Prevention and Control) Authority (EPCA) for the National Capital Region (NCR). The EPCA charged with the task of providing technical and policy guidance, provided a series of Reports to the Court.⁵⁸ It considered various clean fuels, and recommended CNG, a fuel that could not be adulterated, as the best option for India (since fuel adulteration is rampant in India but difficult to detect).⁵⁹ In response, in a far-reaching judgment in July 1998, the Court ordered *inter alia*, the conversion of the entire city bus fleet to CNG by the 31st of March, 2001.

As the Court's deadline approached, the authorities woke up to a transport crisis, and sought to ease the situation by seeking blanket extensions of deadline from the Court. As did private bus operators with support from the then-ruling Bharatiya Janata Party (BJP). Private bus operators, who account for almost 80% of the public transport in Delhi⁶⁰ claimed they had not been notified about the

⁴⁹ See for CSE advertisements issued in public interest as part of the 'Right to Clean Air Campaign'. Available at: <<http://www.cseindia.org/campaign/apc/apc-index.htm>>.

⁵⁰ A Agarwal et al, *Slow Murder: The Deadly Story of Vehicular Pollution in India* (Centre for Science and Environment, New Delhi 1996).

⁵¹ Carter Brandon and Kirsten Homman, *The Cost of Inaction: Valuing the Economy-wide Cost of Environmental Degradation in India*, World Bank, 1995, c.f. *ibid* at 15.

⁵² Central Pollution Control Board, *Pollution Statistics 1993–4* (Delhi, 1995). c.f. *supra* n 50 at 28–29.

⁵³ Order dated 08/11/1996.

⁵⁴ AR Choudhary, CSE, in discussion with the author, Delhi, 10 September 2004.

⁵⁵ BN Kirpal, Retired Chief Justice of India, in discussion with the authors of 'Cleaning up Delhi's Air' see *supra* n 43.

⁵⁶ Order dated 18/11/1997.

⁵⁷ Available at: <<http://envfor.nic.in/divisions/cpoll/delpolln.html>>.

⁵⁸ The Committee obtained status report from the concerned departments, visited the relevant sites, and collected evidence from transport and health experts. B Lal, Chair, EPCA, in discussion with the author, Delhi, 9 September 2004.

⁵⁹ B Lal, Chair, EPCA, in discussion with the author, Delhi, 9 September 2004.

⁶⁰ R Mehta, erstwhile Chairperson and Managing Director, Delhi Transport Corporation, in discussion with the author, 22 September 2004.

Court's orders, and indeed the Delhi government's first public notification was issued only on October 1999, 15 months after the Court order.⁶¹ The Delhi government also sent out mixed signals by reportedly allowing 6,000 diesel buses to be registered in the time period between the Court order and the deadline for conversion to CNG.⁶² In response to the requests for extension, the Court, in one of its strongest worded judgments, categorically refused. It noted, '[a] blanket extension of deadline cannot be given as that would amount to putting premium on the lapses and inaction of the administration and the private transport operators. Orders of this Court cannot be treated lightly. They are meant to be complied with in letter and in spirit. We, therefore, categorically decline to give any blanket extension of our Directions'.⁶³ It did however, to mitigate the sufferings of the commuting public, extend deadlines to September 2001, for those who had ordered CNG buses but were awaiting delivery, in particular, school buses, and the DTC.⁶⁴

As the 1 April 2001 deadline arrived, chaos erupted in the capital. At the pain of being held in contempt by the Court, less than a quarter of the 12,000 buses in Delhi were allowed to ply on the roads. The media was flooded with images of stranded commuters and over-crowded buses.⁶⁵ Shortly thereafter the Chief Minister of Delhi reportedly made a statement in the Legislative Assembly expressing her willingness to face contempt proceedings rather than allow citizens to suffer.⁶⁶ The Government argued that CNG was neither tried-and-tested as a technology nor cost-effective as an option.⁶⁷ They also argued that the Court deadline, in any event, was not feasible, as both CNG and the required infrastructure were in short supply.⁶⁸ The Court warned the Government that 'the attitude, as reflected in the newspapers/electronic media, if correct, is wholly objectionable and not acceptable'.⁶⁹ In a dramatic move, the Additional Solicitor General refused to represent the Delhi government, 'which has decided to act contrary to the orders of the highest Court of the land'.⁷⁰

In September 2001 a few weeks before the extended deadline, the Government appointed a Committee headed by RA Mashelkar, the Director General of the Council for Scientific and Industrial Research (CSIR) to draft an 'Auto Fuel Policy' for India. The Mashelkar Committee Report embraced economic rather than command and control instruments, and recommended setting stringent vehicular emissions, including Euro IV norms by 2010, but shied away from

⁶¹ *The CNG Sabotage*, Down to Earth (15 March 2001), 33, 39.

⁶² *Ibid* at 34.

⁶³ Order dated 26/03/2001.

⁶⁴ *Ibid*.

⁶⁵ See *Manufactured Chaos*, Down to Earth (30 April 2001), 33.

⁶⁶ See TK Rajalakshmi, 'We are just being Cautious', *Interview with Delhi Chief Minister Sheila Dixit*, 18(8) *Frontline* April 2001, 14-27.

⁶⁷ Note: The cost of a bus with a new CNG system, excluding 12% local taxes, is Rs.13.10 lakhs (a diesel bus costs Rs.7.5 lakhs). The cost of conversion from a diesel to CNG system is Rs.4.5 lakhs, excluding 8% local tax. See TK Rajalakshmi and V Venkatesan, *Commuter's Crisis*, 18(8) *Frontline* April 2001, 14-27.

⁶⁸ See *supra* n 66. Also, B Lal noted that powerful interests (transport and diesel lobby among others) were at play, and that the Court came to the Committee's rescue at every stage. B Lal, Chair, EPCA, in discussion with the author, 9 September 2004.

⁶⁹ Order dated 04/04/2001.

⁷⁰ *Ibid*.

specifying the type of fuel or technology to be used.⁷¹ The Court however rejected the Mashelkar Committee Report as, in addition to the fact that it did not solicit and reflect the views of a public health expert, it did not address the issue of inadequate compliance with existing emission norms and the possibility of fuel adulteration.⁷² Meanwhile in order to avoid disruption in transport services the Court first extended the deadline for conversion to CNG to 31 January 2002 and next to 31 March 2002.⁷³ In early April 2002 the Court ordered private diesel buses to pay fines of Rupees 500 per day increasing to Rupees 1,000 per day after 30 days of operation of the buses. It also diverted CNG allocated to the industrial sector to the transport sector.⁷⁴ This appeared to do the trick because by the end of 2002 all diesel city buses had converted to CNG.

The case, did not as one would have expected, arrive at a final judgment once the Court's 28 July 1998 order was implemented. In addition to dealing with the CNG supply problems, the Court, with the help of the EPCA, is considering issues related to the pricing of CNG,⁷⁵ the next generation of reforms in air pollution control,⁷⁶ safety,⁷⁷ inspection and maintenance⁷⁸ of CNG vehicles, and parking policy in Delhi.⁷⁹ It is also monitoring implementation of the CNG policy in other critically polluted cities in India.

The paths these cases have taken are representative of public interest environmental litigations in general and raise several issues that merit closer examination.

3. Issues of Access and Participation

3.1 The Role Judges Play

It has long been recognised in India that a judge's social and value preferences play a role in the decision-making process. Justice Chandrachud in *State of Rajasthan v Union of India* noted, 'it is an accepted fact of constitutional interpretation that the content of justiciability changes according to how the Judge's value preferences respond to the multi-dimensional problems of the day'.⁸⁰ And, the limits to which these value preferences will play a role are largely self-imposed. In the words of Justice Patanjali Sastri in *State of Madras v V.G. Row*,

it is inevitable that the social philosophy and the scale of values of the Judges participating in the decision should play an important part, and the limit to their interference with

⁷¹ Executive Summary, Auto Fuel Policy Report, 2002. Available at: <http://petroleum.nic.in/afp_con.htm>.

⁷² Order dated 05/04/2002.

⁷³ Orders dated 09/2001 and 01/2002.

⁷⁴ Order dated 05/04/2002. B Lal noted that the 'Court stood by the reform like a rock and the government had to yield'. B Lal, Chair, EPCA, in discussion with the author, 9 September 2004.

⁷⁵ Order dated 9/05/2002.

⁷⁶ Orders dated 09/05/2002, 08/05/2003 and 14/02/2003.

⁷⁷ Order dated 11/03/2005.

⁷⁸ Orders dated 05/05/2006 and 29/04/2005.

⁷⁹ Order dated 05/05/2006.

⁸⁰ *State of Rajasthan v Union of India* (1977) 3 SCC 592, 648.

legislative judgment in such cases can only be dictated by their sense of responsibility and self-restraint and the sobering reflection that the Constitution is meant not only for people of their way of thinking but for all.⁸¹

Given the collaborative approach, procedural flexibility, judicially supervised interim orders and forward-looking relief that characterises PIL, there is tremendous scope for value preferences to play a role in PILs. Indeed, in 1996 the second, more high-profile, phase of the *Delhi Vehicular Pollution Case* was initiated by a *suo moto* notice issued by Justice Kuldeep Singh to the Delhi Government.

The Court is perceived as consisting of middle class intellectuals, and therefore as more receptive to others of their ilk, certain social and value preferences (for instance, the right to a clean environment rather than the right to livelihood), and certain modes of argumentation over others (technical rather than social). This perception of the Court is in itself deeply restrictive of participation. The courts are unlikely to be moved by or on behalf of the poor on 'urban poverty',⁸² or 'livelihood'⁸³ issues for the outcomes are predictable and unfavourable. The approach of the Court to the issue of slums is a case in point. In the *Almitra Patel v Union of India*, the Judge took on the issue of slums. He believed that slums, amongst other factors, were responsible for the solid waste problem in cities.⁸⁴ A connection that is not readily self-evident to the tutored—per capita waste generation per day in Delhi is 420g for those in the high income group, 240g for those in the middle income group, 150g for those in the lower middle income group, and only 80g for those in the JJ clusters.⁸⁵ Although the density of population in slums is relatively high, given their lighter ecological footprints, this in itself is not a reason to prioritize clearance of JJ clusters. The Court spent over two years on the issue, for reasons which remain a mystery even to the petitioner.⁸⁶ The Judge expressed himself with 'unblinking disfavour'⁸⁷ on the issue of slums,

Establishment or creating of slums, it seems, appears to be good business and is well organised. The number of slums has multiplied in the last few years by geometrical proportion. Large areas of public land, in this way, are usurped for private use free of cost. . . . The promise of free land, at the taxpayers' cost, in place of a jhuggi, is a proposal

⁸¹ *State of Madras v V.G. Row* 1952 SCR 597, 605.

⁸² R Agarwal, Toxics Link, in discussion with the author, Delhi, 15 September 2004 and 5 January 2007.

⁸³ B Chaturvedi, Chintan Environmental Action and Research Group, in an electronic discussion with the author, 26 October 2004 and 20 February 2007.

⁸⁴ Order dated 15/02/2000.

⁸⁵ COWI & Kadam Environmental Consultants, Feasibility Study and Master Plan for Optimal Waste Treatment and Disposal for the Entire State of Delhi based on Public Private Partnership Solutions (April 2004) (Executive Summary).

⁸⁶ A Patel observed that the fact that the Court tried to play 'Municipal Commissioner', took the case on a tangent for over two years. A Patel, Petitioner and Member, Asim Barman Committee, in discussion with the author, Bangalore, 12 September, 2004, and Delhi, 6 February 2007.

⁸⁷ U Ramanathan, *Illegality and Exclusion: Law in the Lives of Slum Dwellers*, International Environmental Law Research Centre, Working Paper 6 (2004).

which attracts more landgrabbers. Rewarding an encroacher on public land with a free alternative site is like giving a reward to a pickpocket.

An opinion that has been characterised as a ‘disdainful dismissal of any legitimacy to the claims of the city’s poor to housing’.⁸⁸ Yet, these words have been quoted approvingly by judges in lower courts.⁸⁹ The perception of the judiciary as middle class intellectuals with middle class preferences for fewer slums, cleaner air and garbage-free streets, at any cost (to others), has in itself silenced certain voices. The poor, and those who represent them, are unlikely to approach the Court with their concerns, as they are likely to be left the poorer for it.⁹⁰

It is worth noting that although in public interest cases the Court, in theory, is accessible to all, effective litigation involves the continual presence of the petitioner, the might of a solicitor’s firm and a heavyweight counsel to lend gravitas to the occasion. While the lawyers may not charge for their services, there are usually several other expenses. All these factors contrive to alienate the poor and illiterate from the portals of the Court. PILs are often filed on their behalf, but not usually by them.

This is ironic given the origins of judicial activism and PIL in India. The Court opened its doors and liberalised *locus standi* in the late 1970s to address the ‘problems of the poor’. Yet today, three decades on, it is the problems of the middle-class, in particular the ones that affect them, that are most likely to be viewed sympathetically by the Courts. The petitioner in the *Municipal Solid Waste Management Case* noted, for instance, that the Judges tend to focus first on cleaning up Delhi where they live and only then on other cities.⁹¹

In both cases under consideration the Court dealt with issues that had direct and critical implications on the poor and others not before the Court—in the *Municipal Solid Waste Management Case* on the informal recycling sector, and in the *Delhi Vehicular Pollution Case* on both those who rely on public transport and those who provide it. Yet it is questionable whether the processes the Court set in motion contained avenues for their participation. In both cases the Court created Committees. The Asim Barman Committee, set up by the Court in the *Municipal Solid Waste Management Case* contained seven high-ranking functionaries/bureaucrats and the petitioner.⁹² The EPCA set up by the Court in the *Delhi Vehicular Pollution Case*, a fraction more representative, contained three high-ranking bureaucrats, a non-governmental organisation (NGO) and a representative of the Automobile industry.⁹³ When the Court created the respective

⁸⁸ Ibid.

⁸⁹ See e.g. *Wazirpur Barton Nirmata Sangh v Union of India*, MANU/DE/2140/2002 (C.W. No. 2112 of 2002, Order dated 29/11/2002). The Delhi High Court noted that, ‘[o]ne cannot but use the expression as stated in the said judgment’ and quashed a Union of India policy providing alternate sites for JJ dwellers. Ibid. at para 44.

⁹⁰ B Chaturvedi, Chintan Environmental Action Group, noted although the Courts are available, in theory, to the poor, given their lack of legal literacy, court and media savvy-ness, in practice the poor cannot use the Courts to meet their ends. In electronic discussion with the author, 26 October 2004 and 20 February 2007.

⁹¹ A Patel, Petitioner and Member, Asim Barman Committee, in discussion with the author, Bangalore, 13 September, 2004, and Delhi, 6 February 2007.

⁹² Order dated 16/01/1998.

⁹³ Order dated 07/01/1998.

Committees, as is its practice, it did not lay down any guidelines for their functioning. As a result the extent of public participation in the work of each Committee set up by the Court depends on the predilections of its members.

In the *Municipal Solid Waste Management Case* there was 'restricted NGO participation'.⁹⁴ The Asim Barman Committee held four regional workshops to which city officials were invited. One of the workshops had a few international and other organisations as well.⁹⁵ One NGO observer noted that NGOs were not invited, and that she had to 'force' her way in,⁹⁶ and another that he had to 'ask to be invited'.⁹⁷ Once they got past the door they realized that events were 'not structured to be participative,' and the process was 'neither consultative nor democratic'.⁹⁸ In addition to the non-participative process, NGOs were also alienated by the 'technology focus' of the agenda.⁹⁹ The solutions devised and recommended by the Committee are driven by the notion that 'leaner municipalities and greater efficiency' would solve the problem of MSW management. Most of the NGOs working in the area, on the other hand, are focused on the rights of rag-pickers,¹⁰⁰ social implications of policy changes and 'zero waste and waste minimization' as elements of the solution.¹⁰¹ The technology focus of the agenda revealed that the 'understanding of waste as perceived by the mover of the PIL is very narrow'.¹⁰² It is perhaps not surprising, given the lack of public participation in the process leading up to the MSW Rules,¹⁰³ that the Rules do not create any avenues for public participation.

In the *Delhi Vehicular Pollution Case* the EPCA in part because Anil Agarwal, CSE, was one of its members,¹⁰⁴ took on board a wider range of views than the Asim Barman Committee. In addition to CSE, the EPCA consulted organisations such as The Energy Research Institute (TERI) and educational institutions such as the Indian Institute of Technology (IIT). Yet, the decision to consult particular organizations was made on an *ad hoc* and discretionary basis. Not all stake holders

⁹⁴ R Agarwal, Toxics Link, in discussion with the author, Delhi, 15 September 2004, and 5 January 2007.

⁹⁵ PU Asnani, Member, Asim Barman Committee, in discussion with the author, Delhi, 14 September 2004.

⁹⁶ B Chaturvedi, Chintan Environmental Action and Research Group, in an electronic discussion with the author, 26 October 2004 and 20 February 2007.

⁹⁷ R Agarwal, Toxics Link, in discussion with the author, Delhi, 15 September 2004, and 5 January 2007.

⁹⁸ B Chaturvedi, Chintan Environmental Action and Research Group, in an electronic discussion with the author, 26 October 2004 and 20 February 2007.

⁹⁹ *Ibid.*

¹⁰⁰ R Agarwal, Toxics Link, in discussion with the author, Delhi, 15 September 2004, and 5 January 2007.

¹⁰¹ B Chaturvedi, Chintan Environmental Action and Research Group, in an electronic discussion with the author, 26 October 2004 and 20 February 2007.

¹⁰² *Ibid.*

¹⁰³ The Municipal Solid Waste (Management and Handling) Rules (MSW Rules) were drafted by the Central Pollution Control Board (CPCB). There were unofficial communications between the petitioner and the CPCB scientists, but the impact of these on the final draft is difficult to gauge. The Asim Barman Committee was sent two alternate drafts, and in a subsequent meeting with the CPCB they indicated their preferred option. The preferred draft of the MSW Rules was forwarded to the Ministry of Environment and Forests (MOEF). After some delay in the MOEF, the Court on 13 September, 2000, expressed the 'hope' that draft MSW Rules formulated by the CPCB would be notified before the next hearing (Order dated 13/08/1999). This provided the process with the necessary impetus and the MSW Rules were notified on 3 October 2000.

¹⁰⁴ The record indicates that Anil Agarwal suggested holding meetings with NGOs to elicit their views. See *supra* n. 43 at 39.

were identified and consulted, and no avenues for wider public consultation were explored. Some with a direct stake in the proceedings, such as private bus operators, felt frustrated by their lack of access to the EPCA and the *amicus curiae*.¹⁰⁵ The EPCA did not engage in any formal consultations with the public, despite the fact that conversion to CNG would have greater implications for the public exchequer as well as higher transaction costs than other options considered. CSE represented NGO/public views, but it did not engage in public consultations before formulating its position.¹⁰⁶ No systematic effort was made to keep the public to solicit comment on the various options considered. Although some public advertisements were taken out, there was no mechanism for feedback from the public.¹⁰⁷

It could be argued that the nature and degree of participation, given the lack of guidelines from the Court, depends on the nature and composition of the Committees.¹⁰⁸ And, neither of these cases, although each to a different degree, offered adequate avenues for public participation in the resolution of issues with critical implications for certain groups, and wider implications for all.

As the processes used to arrive at a resolution of the issues in the *Municipal Solid Waste Management* and *Delhi Vehicular Pollution* cases are arguably less than participatory, it is not surprising that the solutions devised have been criticised as being less than equitable, that is, less than fair just and impartial.¹⁰⁹

3.2 The Role Public Watch-Dogs Play

Even a cursory glance at the list of PILs filed in the Court will reveal what some would characterise as a 'clique'¹¹⁰ of public interest litigators and petitioners. Between them MC Mehta, HD Shourie, Common Cause, and BL Wadehra, to name a few, have filed hundreds of PILs covering every aspect of governance from environmental to political. BL Wadehra has even published a 'Handbook' containing model PIL formats with the aim of providing a 'usable tool for the benefit of citizens'.¹¹¹ It is certainly laudable that these well-intentioned and public-spirited citizens have devoted their lives and purses to public causes. They perform a valuable role as public watch-dogs. And, the very threat of their engagement with the issue often has the desired impact.¹¹² It is, however, a matter of concern that their leverage with the Court may result in converting 'one strain

¹⁰⁵ Ibid at 30–31

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

¹⁰⁸ R Agarwal, *Toxics Link*, noted that certain Supreme Court Committees such as the High Power Committee on Management on Hazardous Wastes established by the Court in *Research Foundation for Science v Union of India* (Writ Petition Number 657 of 1995), in part due to the intervention of one of its members, Claude Alvares, Goa Foundation, involved numerous NGOs at every stage of its deliberations. In discussion with the author, Delhi, 15 September 2004, and 5 January 2007.

¹⁰⁹ The term equity is used in its common parlance sense of 'fair, just and impartial in law'.

¹¹⁰ B Chaturvedi, *Chintan Environmental Action and Research Group*, in an electronic discussion with the author, 26 October 2004, and 20 February 2007.

¹¹¹ See generally BL Wadehra, *Public Interest Litigation: A Handbook* (Universal Law Publishing, New Delhi 2003)

¹¹² B Jairaj, *Consumer Action Group*, in discussion with the author, Delhi, 18 December 2004, and 6 February 2007.

of opinion into policy, while annihilating all others'.¹¹³ This is particularly problematic given the fact that most PILs are not the end point of citizen mobilisation efforts but rather points of entry for those with a distinct view based on particular sensibilities. A further concern lies in the fact that there are tremendous practical hurdles limiting the access of the poor to the Court, and therefore restricting the range of views before the Court.

4. Issues of Equity and Fairness

Those working in the area of solid waste management highlight several inequities in the MSW Rules (which emerged, at least in part, from the Asim Barman Committee Report¹¹⁴).

First and foremost, the MSW Rules ignore the 'waste interests of the poor'.¹¹⁵ Waste-pickers are part of the lowest rung of urban poor. They live in conditions of 'filth, deprivation and social ostracism'.¹¹⁶ In Delhi alone there are 90,000 to 1,000,000 waste pickers, of which 94% are from backward and tribal castes, and an estimated 50,000 are children.¹¹⁷ These, the most vulnerable groups in society, provide 'an unacknowledged subsidy to the waste producer, the consumer goods and packaging industry and the legal waste owner—the municipal body'.¹¹⁸ Waste pickers collect large quantities of waste from the streets, municipal bins and landfills—estimates say 10–15% of all wastes—thereby giving the city a face-lift, reducing the work of the municipality and decreasing our impact on the planet.¹¹⁹ The impact of the MSW Rules on this vulnerable group in society is profound.

The MSW Rules are 'techno-legal' rather 'socio-legal'.¹²⁰ They do not contain any reference to the waste picker communities, and they encourage privatisation.¹²¹ The UN-funded Feasibility Study the Municipal Corporation of Delhi (MCD) authorised in the wake of the MSW Rules notes that the implementation of the MSW Rules together with the setting up of public–private partnerships, such as privatised landfills, will lead to substantial reduction in rag-picking opportunities along the waste route.¹²²

¹¹³ B Chaturvedi, Chintan Environmental Action and Research Group, in an electronic discussion with the author, 26 October 2004 and 20 February 2007.

¹¹⁴ See supra n 32.

¹¹⁵ B Chaturvedi, Chintan Environmental Action Group, in an electronic discussion with the author, 26 October 2004 and 20 February 2007; and, R Agarwal and S Gupta, Toxics Link, in discussion with the author, Delhi, 15 September 2004.

¹¹⁶ R Agarwal et al, Recycling Responsibility: Traditional Systems and New Challenges of Urban Solid Waste in India 35 (Toxics Link, New Delhi June 2002).

¹¹⁷ Ibid at 36–37.

¹¹⁸ Ibid at 35.

¹¹⁹ Ibid.

¹²⁰ S Pal, Municipal Corporation of Delhi, in discussion with the author, Delhi, 21 September 2004 and 22 February 2007.

¹²¹ See supra n 103 (in particular in sections 3(xvi), 4(2) and 7(2) the Rules recognize a role for an 'operator of facilities' in waste processing, disposal and management). See also supra n 114 at 65 (incentives to encourage private sector participation).

¹²² COWI & Kadam Environmental Consultants, Feasibility Study and Master Plan for Optimal Waste Treatment and Disposal for the Entire State of Delhi based on PPP Solutions, April 2004.

It recognises that the implementation of the MSW Rules, given that no mechanism is being developed to rehabilitate rag-pickers or provide them with a formal cooperative role in the solid waste management process, will have strong social implications.¹²³ Yet given the imperative to comply with the MSW Rules in a time-bound fashion, the MCD has entered into a private–public partnership in garbage collection, segregation, transportation and disposal.¹²⁴ Some observers argue that although privatisation in itself is not problematic, may become problematic if the municipal authorities do not include detailed ‘service parameters’ in their contracts with private companies. Typically, if a municipality decides to contract out waste management tasks to private companies, waste pickers are marginalised, and the private company collects and disposes rather than recycles the waste. Not only are the waste pickers displaced, but recycling takes a back seat as well.¹²⁵ As one observer commented, ‘it is ironic that the MSW Rules demand recycling but ignore the recyclers’.¹²⁶

The MCD is reportedly considering schemes to train rag-pickers in segregation and recycling of wastes with the ultimate aim of integrating rag-pickers into the waste management programme.¹²⁷ It is also exploring rehabilitation schemes for child rag pickers. The MCD however has no mandate, and therefore has no demarcated funds for these schemes. These schemes owe their existence solely to the personal sensibilities of relevant officials.¹²⁸ MCD officials believe that the silence in the MSW Rules with respect to the waste-picking communities hinders efforts to rehabilitate them. If the Rules had highlighted the role of rag-pickers, rehabilitation efforts could have been justified by reference to the Rules.¹²⁹

Some observers also point out that the MSW Rules, with its emphasis on privatisation, decreases the stake of citizens in waste management. MSW Rules are likely to displace decentralised community waste management schemes which are tailored to local conditions, and have been proven to decrease waste generation, improve livelihoods, enhance natural resource conservation, increase public participation and heighten environmental awareness.¹³⁰ Although the Rules encourage ‘awareness programmes’ for citizens, they do not envisage mechanisms to integrate and such decentralised community-based waste management schemes into the work of the municipality, or indeed support them. Privatisation of

¹²³ Ibid.

¹²⁴ *Clean Up: MCD Joins Hands with Private Players*, Times News Network, 7 October 2004.

¹²⁵ S Gupta, Toxics Link, in discussion with the author, Delhi, 15 September 2004.

¹²⁶ B Chaturvedi, Chintan Environmental Action Group, in an electronic discussion with the author, 26 October 2004, and 20 February 2007.

¹²⁷ *Ragpickers to be Trained How to Segregate Waste*, Indian Express, 21 September 2004.

¹²⁸ R Ray, MCD, in discussion with the author, Delhi, 22 September 2004.

¹²⁹ S Pal, MCD, in discussion with the author, Delhi, 21 September 2004 and 20 February 2007.

¹³⁰ See generally the numerous initiatives described in R. Agarwal and S K Gupta, ‘Rethinking urban waste in India: creating a community paradigm’, (2003) 33 *Social Change* 58 and, S. Gupta, *Partnership For Change: Bringing Stakeholders Together To Manage Solid Waste In A Low-Income Community In Delhi*, Paper presented at the Collaborative Working Group on Solid Waste Management Workshop, Dar es Salaam, March 2003 (on file with the author).

municipal work will likely diminish the space available for such initiatives to exist and flourish.¹³¹

In the *Delhi Vehicular Pollution Case*, the equity concerns are less stark, but they are nevertheless significant. R Mehta, erstwhile Chairman and Managing Director of the Delhi Transport Corporation (DTC) described the conversion to CNG as a 'legally driven process which badly affected the common man'.¹³² The DTC, on pain of contempt, took diesel buses off the roads when the Court-ordered deadlines passed. Although CNG buses were allowed to ply on the roads, given the scarcity of CNG in the early days, these buses had to travel 40 kms and spend several hours queuing up outside CNG dispensing stations to collect CNG. As a result only a few buses were available to ferry passengers. The hardship was borne by those who relied on public transport not those with private vehicles.¹³³ Eventually the CNG supply crisis eased but only at the expense of industries.¹³⁴

The DTC was obliged to buy 2000 buses in 14 months to implement the Court order. CNG buses are 1.6 times more expensive than diesel buses.¹³⁵ And there are considerable costs associated with setting up CNG stations.¹³⁶ The DTC is arguably in 'financial doldrums' as a result of complying with the Supreme Court's orders.¹³⁷ Efforts to offset the costs by increasing bus fares have been controversial (and politicised), because of their impact on the 'daily wagers', that is, the common person.¹³⁸ In May 2002, however, bus and auto fares increased nominally.¹³⁹

The Court imposed an extremely high-cost option, and in any developing country it is important to ask whether the cost to the public exchequer was justified, whether lower cost alternatives were available, and indeed who will ultimately pay the cost. As one government official noted, '[i]n a country like India there are many other priorities'.¹⁴⁰ It is difficult to determine which priorities were subordinated in the service of Delhi's air quality, but it is surely a question that needs to be asked.

¹³¹ S Gupta, *Toxics Link*, noted that when private contractors replace the municipality the stake of citizens is reduced, for citizens have recourse against their municipality but not against a private contractor. In discussion with the author, Delhi, 15 September 2004.

¹³² R Mehta, erstwhile Commissioner, MCD, in discussion with the author, Delhi, 22 September 2004.

¹³³ *Ibid.*

¹³⁴ *CNG supply to Maruti to be cut*, *The Asian Age* 17 May 2002.

¹³⁵ R Bose and D Sperling, *Transport in Delhi, India: Environmental Problems and Opportunities*, *Transportation Research Record No. 1815*, 2002.

¹³⁶ AK De, *Development of CNG Infrastructure in India with Special Reference to National Capital Territory of Delhi*, 2004. Available at: <<http://www.ficci.com/media-room/speeches-presentations/2004/feb/feb3-a-k.pdf>>. It costs Rs. 44.8 Million to build a mother station, Rs. 29 Million for an online station, Rs. 15.8 Million for a Daughter-Booster station, and Rs. 13.1 Million for a Daughter station. *Ibid.* The number of CNG stations increased from 9 in 1998 to over 150 by 2005. See Bambang Nurbianto, *CNG Conversion: Learning from New Delhi*, *The Jakarta Post*, 19 March 2005; see also for details of CNG business in 2004-5, *Indraprathsa Gas Limited Annual Report 2004-05*, 3. Available at: <http://www.iglonline.net/annual_report.pdf>.

¹³⁷ *Ibid.* Fuel Choices for Transport and the Environment 11 (The Energy Resources Institute (TERI), New Delhi 2004) (noting that: a Bharat Stage II CNG bus is Rs. 13.87 lakhs as compared to a Bharat Stage II Diesel Bus which is Rs. 11.69 lakhs; ULSD is Rs. 10.94 per litre as compared to CNG which is Rs. 14.41 per litre; and the running costs are Rs. 8.92 per kilometre for ULSD as compared to Rs. 11.11 per kilometre for CNG).

¹³⁸ *Govt. hikes public transport fares, blames Centre for it*, *The Indian Express*, 7 May 2002; and, *Delhi BJP to observe 'protest week' against fare hike*, *Outlook*, 8 May 2002. See also *BJP Stages Protests Against Hike in Bus Fares*, *Outlook*, 11 May 2002.

¹³⁹ *Only nominal hike in bus, auto fares*, *Tribune News Service*, 7 May 2002.

¹⁴⁰ N Bhatt, MOEF, in discussion with the author, Delhi, 21 September 2004.

Private transporters who were forced to make huge investments to convert to CNG flagged another equity issue. They argued that the contribution of private buses to pollution was not significant compared to the number of other vehicles on the roads of Delhi.¹⁴¹ And, indeed, it is difficult to ascertain, on what principled environmental basis a distinction was drawn between vehicles for private use and vehicles for commercial use. In 2000 there were an estimated 852,000 cars/jeeps, 45,000 auto rickshaws, 8,000 taxis and 18,000 buses.¹⁴² The contribution of the approximately 70,000 private commercial vehicles to air quality in Delhi, while not insignificant, is certainly not in the same league as the contribution of the 852,000 private cars/jeeps, yet the former alone were targeted. And, today, the gains from the Court-ordered conversion to CNG are being offset by the increase in the number of private vehicles in Delhi, as well as the increase in the dieselisation of the private car fleet. In four short years the registration of diesel cars increased from 1,881 (in 1999) to 13,890 (in 2003).¹⁴³ And, the steady rise in nitrogen dioxide (NO₂) emissions in Delhi is sourced in part to this.¹⁴⁴

5. The Issue of Effectiveness

Although the Court's environmental commitment is seldom challenged, its ability to devise effective solutions to the problems under consideration is often called into question. The Court's decisions in the *Municipal Solid Waste Management* and *Delhi Vehicular Pollution* cases are no exceptions.

Those who work in the field of solid waste management identify gaps in the Court's and Asim Barman Committee's appreciation of the problem, and the resulting anomalies in the MSW Rules. NGOs argue that the Rules do not contain mechanisms or incentives either to promote recycling or minimise waste, both of which are essential to a holistic solution to the problem of solid waste management.¹⁴⁵ Further, the Rules permit processing of wastes through incineration [also known as 'waste to energy' or refuse-driven fuel] technology,¹⁴⁶ a technology which is both controversial and arguably ill-suited to Indian conditions.¹⁴⁷

¹⁴¹ See supra note 104 at 31.

¹⁴² Ranjan Bose et al, *Transportation in Developing Countries: Greenhouse Gas Scenarios for Delhi, India*, Pew Centre on Global Climate Change 13 (Pew Centre on Global Climate Change, Washington D.C. 2001) (data drawn from *Delhi Statistical Handbook* and Transport Department, Delhi). Available at: <<http://www.pewclimate.org>>.

¹⁴³ State Transport Authority, Delhi, c.f. *Air Quality Gains from the First Generation Reforms and Challenges of Second Generation Problems in Delhi* (CSE, July 2004) (noting an annual increase of 106% since 1998–99). Available at: <http://www.cseindia.org/campaign/apc/pdf/quality_gains.pdf>. See also CSE, *Winter Woes: Delhi Headed for Air Pollution Disaster* 14 November 2006 (noting that, based on CPCB data, the share of diesel cars, 4% of the total new car registration in 1999, has climbed to nearly 20% in 2006).

¹⁴⁴ CPCB Newsletter, Parivesh (2003) (noting the increase in levels of NO₂ by 15% from 2002) and CPCB Newsletter, Parivesh (2004) (noting that NO₂ continues to show an upward trend, and tracing the increase in vehicle population). The CPCB *Continuous Ambient Air Quality* data, available at: <<http://164.100.43.188/cpcbnew/search.asp>> reveals a steady increase in NO₂ from 2002 to 2007.

¹⁴⁵ B Chaturvedi, Chintan Environmental Action and Research Group, in an electronic discussion with the author, 26 October 2004; See also R Agarwal and KS Gupta, *Rethinking Urban Waste in India: Creating a Community Paradigm*, 33 *Social Change* (2003) 58.

¹⁴⁶ Schedule II (5), Schedule II, Municipal Solid Waste (Management and Handling Rules), 1999.

¹⁴⁷ S Gupta, Toxics Link, in discussion with the author, Delhi, 15 September 2004 (noting the example of the failed Timarpur Incineration Plant); A Patel, Petitioner and Member, Asim Barman Committee, in

Incineration technology uses dry waste which deprives the rag-pickers of the materials they live off;¹⁴⁸ it is not profitable due to the high percentage (20–50%) of inerts in urban solid waste;¹⁴⁹ and it produces dioxins which are linked to cancer, immune system damage, reproductive and developmental problems.¹⁵⁰ According to the United Nations Environment Programme 69% of dioxins in the global environment are attributable to waste incinerators.¹⁵¹ Incineration technology is particularly problematic in developing countries as these countries lack the capacity to monitor stack emissions or ash toxicity, the technical ability to test releases, enforcement mechanisms to ensure compliance with operational parameters and secure landfills for the ash.¹⁵² The petitioner in the *Municipal Solid Waste Management Case* is opposed to this technology, but she could not exclude this technology from the Report and the Rules.¹⁵³ In 2005, at the petitioner's request, the Court stayed the sanction of any further subsidy in respect of proposed and future Municipal Waste to Energy Projects, subsidies the petitioner argued diverted Municipalities from the adoption of 'small sustainable options'.¹⁵⁴ The Court constituted a Committee of Experts to study and report on existing WTE plants.¹⁵⁵ The Committee chaired by the Ministry of New and Renewable Energy, filed a report in favour of WTE technology, and sought a vacation of the stay.¹⁵⁶ The petitioner is currently challenging this, and the Court is considering the matter.¹⁵⁷

The MCD officials note that the MSW Rules are difficult to implement as they are too prescriptive in some respects, and unrealistic in others. For instance, the requirement in the MSW Rules that municipal authorities are to collect waste 'door-to-door' is not only too prescriptive, it also conflicts with section 353(b) of the Delhi Municipal Corporation Act, 1957, which locates the responsibility for

discussion with the author, Delhi, 6 February 2007 (noting that the low calorific value of the Indian urban waste makes energy production economically unviable); See also *Waste Plant may add toxins in air: Discarded by US and Europe City Opts for Outdated Technology*, The Times of India, 4 March 2007. S Pal, MCD, however, argued that Japan has 18,000 incinerators treating 80% of its municipal waste, and it is possible to put in the technological fixes exists to address toxin releases. In discussion with the author, 5 March 2007.

¹⁴⁸ B Chaturvedi, Chintan Environmental Action and Research Group, in an electronic discussion with the author, 26 October 2004 and 20 February 2007.

¹⁴⁹ See supra n 85.

¹⁵⁰ See N Tangri, *Waste Incineration: A Dying Technology* (Global Anti-Incinerator Alliance (GAIA), Quezon City, Philippines 2003) at 11–18. Available at: <<http://www.no-burn.org/resources/library/wiadt.pdf>>

¹⁵¹ *Dioxin and Furan Inventories: National and Regional Emissions of PCDD/PCDF*, UNEP, May 1999 at 85 (Table 6o).

¹⁵² See generally N Tangri, *Bankrolling Polluting Technology: The World Bank and Incineration* (Global Anti-Incinerator Alliance (GAIA), Quezon City, Philippines 2002). Available at: <<http://www.noburn.org/resources/library/worldbankreport.pdf>>.

¹⁵³ A Patel, Petitioner and Member, Asim Barman Committee, in discussion with the author, Bangalore, 13 September 2004, and Delhi, 6 February 2007.

¹⁵⁴ *Ibid.* One government official, who wished to remain anonymous, noted that government officials prefer large capital intensive projects as they offer opportunities for corrupt officials to enter into illegal financial transactions. In discussion with the author, Delhi, 15 February 2007. Other government officials however noted that it was impossible to focus solely on small sustainable options given the quantity of waste produced in the big metropolitan cities. JK Dadoo, Secretary (Environment), Government of National Capital Territory of Delhi, in discussion with the author, 15 February 2007.

¹⁵⁵ Order dated 06/05/2005.

¹⁵⁶ Order dated 01/09/2006.

¹⁵⁷ Order dated 04/01/2007.

'collection and deposit of rubbish' with the owners and occupiers of premises not the municipal authorities.¹⁵⁸ The requirement to encourage segregation at source,¹⁵⁹ while not in itself questionable, is a method with proven success only in industrialised countries and is unlikely to be achieved overnight in India.¹⁶⁰ Segregation at the household level is not a culturally embedded behaviour, and will need to be learned. Moreover even in those residential localities in which separate bins exist for bio-degradable and non-biodegradable wastes, and limited waste segregation is practiced, the waste in both bins is currently tipped into the same container, called 'dhalao,' the contents of which are destined for the landfills.¹⁶¹ In Delhi only 300 of the 7,000 tons of MSW produced every day is composted; the rest is sent for 'open dumping' to three landfills, two of which are past their scheduled closure date.¹⁶² In any case, the emphasis on composting¹⁶³ is considered by some to be pointless, since even the 5% of national daily waste that is currently composted depends on the government for a market.¹⁶⁴ This is in part because of the existence of strong chemical fertilizer lobbies and therefore subsidies. Compost is a poor relative. As one official observed, municipalities with numerous demands on their time are unlikely to lobby for compost subsidies.¹⁶⁵

The deadlines set by the MSW Rules are arguably unrealistic. And this is borne out, in part, by the fact that not a single municipality met the deadlines.¹⁶⁶ And indeed four years after the last deadline expired, the petitioner estimates that only one municipality is in total compliance.¹⁶⁷ One MCD official observed that the unrealistic deadlines are a reflection of the fact that 'implementation is bottom to top and policy-making is top to bottom'.¹⁶⁸ Effective implementation requires technical, financial and institutional capacity.¹⁶⁹ And, municipalities across India have limited reserves of all three.¹⁷⁰ To impose deadlines, and increase accountability in situations where technical preparedness, capacity and finances are limited is to distort the decision-making process. Authorities are likely to react in a panic-stricken and reactive rather than a strategic fashion. The panic induced by the threat of contempt proceedings and the possibility of missing

¹⁵⁸ Section 353, Delhi Municipal Corporation Act, 1957.

¹⁵⁹ Schedule II(2), Municipal Solid Waste (Management and Handling Rules), 1999.

¹⁶⁰ S Pal, MCD, in discussion with the author, Delhi, 21 September 2004.

¹⁶¹ Ibid.

¹⁶² Ibid on 22 February 2007.

¹⁶³ Schedule II(5), Municipal Solid Waste (Management and Handling Rules), 1999.

¹⁶⁴ AB Akolkar, CPCB, Delhi, in discussion with the author, 23 September 2004, and, S Pal, MCD, in discussion with the author, Delhi, 22 February 2007.

¹⁶⁵ S Pal, MCD, in discussion with the author, Delhi, 22 February 2007.

¹⁶⁶ See CPCB, Management of Municipal Solid Wastes, 5.5 (recording patchy implementation of the MSW rules). Available at: <http://cpcb.nic.in/pcpdiv_plan4.htm>. See also Assessment of the Status of Municipal Solid Waste Management in Metro Cities and State Capitals 17–21 (CPCB, New Delhi 2006).

¹⁶⁷ The municipality town of Suryapet in Andhra Pradesh is in total compliance. It has a population of 103,000 and generates waste of 32 metric tons per day. See *Solid Waste Management Initiatives in Small Towns: Lessons and Implications* 19 (World Bank, New Delhi 2006).

¹⁶⁸ AB Akolkar, CPCB, in discussion with the author, Delhi, 23 September 2004.

¹⁶⁹ AB Akolkar, CPCB, Kirtee Devi, USAID-FIRE, and Shubagato Dasgupta, World Bank, in discussion with the author, Delhi, 23, 24 and 25 September 2004, respectively.

¹⁷⁰ SK Singh, CPCB, in discussion with the author, Delhi, 23 February 2007.

deadlines may also result in the diversion of scarce funds from other more strategic uses.¹⁷¹

This is a concern expressed in the context of the *Delhi Vehicular Pollution Case* as well. Government officials argue that an effective and sustainable solution to the problem of air quality in India would necessarily require the creation of a sound database on air quality information, adoption of cost-effective and preferably home-grown technologies, increased finances, a trained staff and social acceptance.¹⁷² If there is increased accountability in a situation of scarcity on every other front, it cannot but lead to the adoption of hasty and unsustainable solutions.

Numerous other concerns have also been expressed with respect to the effectiveness of the Court's CNG order. Policy-scientists argue that an effective solution to the problem of air quality is one that is economically viable, environmentally friendly and easily implement-able.¹⁷³ Although CNG is an environmentally friendly fuel, some argue that as a solution to the CNG problem it is neither economically viable nor easily implement-able. As highlighted earlier, CNG is a high-cost option.¹⁷⁴ Since it was Court-ordered, the necessary resources were devoted to CNG conversion in Delhi, but it is only now that the MOEF is looking into the cost-effectiveness of CNG.¹⁷⁵ That it was difficult to implement is evident from the 'teething troubles' referred to earlier.¹⁷⁶

Further, CNG is not a complete solution in itself. This is evident, in part, from the fact that notwithstanding the introduction of the CNG programme in Delhi, there is a 21.3% increase in cases of lung disease, and more than 20% increase in asthma attacks.¹⁷⁷ A complete solution would address all the relevant pollutants, choose a range of clean fuels and institutionalise inspection and maintenance facilities.¹⁷⁸ CNG only addresses the problem of suspended particulate matter (in this CNG has the clear advantage over other fuels).¹⁷⁹ According to the Mashelkar Committee Report¹⁸⁰ although a CNG vehicle emits 80% less particulate matter, 25% less nitrous oxides and 35% less hydrocarbons, the output of carbon monoxide (CO), a precursor to green house gases (GHGs), is

¹⁷¹ AB Akolkar, CPCB, in discussion with the author, Delhi, 23 September 2004.

¹⁷² N Bhatt, Ministry of Environment and Forests (MOEF), in discussion with the author, Delhi, 21 September 2004.

¹⁷³ R Bose, TERI, and N Bhatt, MOEF, in discussion with the author, Delhi, 15 September and 21 September, 2004 respectively.

¹⁷⁴ See supra text accompanying n 132-40. See also TERI, Fuel Choices for Transport and the Environment 11 (2004).

¹⁷⁵ N Bhatt, MOEF, in discussion with the author, Delhi, 21 September 2004.

¹⁷⁶ See supra text accompanying n 132-7.

¹⁷⁷ Leapfrog Factor: Clearing the Air in Asian Cities (Centre for Science and Environment (CSE), New Delhi 2006).

¹⁷⁸ Ibid. See also Ranjan Bose, TERI, in discussion with the author, Delhi, 15 September 2004.

¹⁷⁹ See supra n 143; See also infra n 180 at 148. A CSE Study reports a 26% decrease in suspended particulate matter in Delhi. See supra note 177.

¹⁸⁰ In September 2001 the Government appointed a Committee headed by RA Mashelkar, the Director General of the Council for Scientific and Industrial Research (CSIR) to draft an 'Auto Fuel Policy' for India. The Mashelkar Committee Report embraced economic rather than command and control instruments, and recommended setting stringent vehicular emissions, including Euro IV norms by 2010, but shied away from specifying the type of fuel or technology to be used. Executive Summary, Auto Fuel Policy Report (2002). Available at: <http://petroleum.nic.in/afp_con.htm>.

over five times greater than that for diesel.¹⁸¹ And, a CNG vehicle driven for a mile emits 20% more GHGs than driving a comparable diesel vehicle for a mile. It concludes that ‘from the perspective of global warming, the decision to move from diesel to CNG is a harmful one’.¹⁸²

The Court chose the EPCA-recommended ‘one fuel’ option over the Governmental-alternative of increasingly stringent emissions standards and a range of permissible clean fuels. The Court has also chosen, in order to make CNG competitive, to involve itself in the issue of CNG pricing.¹⁸³ Yet it is questionable if CNG is a scalable option. CNG is currently supplied in the transport sector only in Delhi, Surat, Mumbai and Ankleshwar. Extending CNG availability to other cities such as Kolkatta and Chennai would imply substantial investments in CNG infrastructure, which could only be justified if there is a demand for CNG in sectors such as power and fertilizers as well.¹⁸⁴ In the meantime, even polluted metropolises like Chennai will need to explore other clean fuel options.¹⁸⁵

Air quality data indicates an increase of 15% in the levels of NO₂ from 2002.¹⁸⁶ This spike in NO₂ can be attributed in part to the introduction of the CNG programme.¹⁸⁷ The Mashelkar Committee Report noted in 2002 that, ‘in the case of alternate fuels CNG and LPG to achieve the intended benefits with respect to emissions, maintaining the quality of conversion kits is crucial’.¹⁸⁸ CSE also admits that CNG vehicles are extremely sensitive to maintenance, and ‘NO₂ emissions can increase rapidly if the CNG vehicles are poorly maintained’.¹⁸⁹ The third element of an effective solution—institutionalised inspection and maintenance facilities—was conspicuous by its absence in the early years after the CNG conversion, hence the NO₂ spike. Clean fuel and clean technology are not sufficient in themselves—they need to be matched with efficient inspection and maintenance facilities. The Court has since realised this, and it is currently engaged, through the EPCA, in institutionalising inspection and maintenance in Delhi.

The NO₂ spike can also be traced to the growing numbers of private diesel vehicles, and the growing number of vehicles in Delhi more generally.¹⁹⁰ The disturbing dieselisation of the private vehicle fleet has been referred to earlier.¹⁹¹

¹⁸¹ Report, a Fresh Look at CNG: a Comparison of Alternate Fuels (2001) cited in supra n ibid at 148.

¹⁸² Ibid.

¹⁸³ Order dated 09/05/2002. The EPCA submitted a report on CNG pricing. See Getting the Prices Right: Promoting environmentally acceptable fuels through fiscal measures (Environment Pollution (Prevention and Control) Authority (EPCA), New Delhi 2002). Available at: <<http://www.cpcb.nic.in/epcareport.htm>>.

¹⁸⁴ See TERI supra n 137.

¹⁸⁵ B Lal, Chair, EPCA, in discussion with the author, Delhi, 9 September 2004.

¹⁸⁶ See supra n 144 at 23.

¹⁸⁷ See supra n 143 at 4. See also V Kathuria, *Impact of CNG on vehicular pollution in Delhi: a note*, Transportation Research Part D 9 (2004) 409 (noting that while No₂ has risen after the conversion, SPM has only fallen marginally).

¹⁸⁸ See supra n 180 at 150.

¹⁸⁹ See supra n 143 at 5.

¹⁹⁰ Ambient Air Quality Trends in 17 Cities 66 (Central Pollution Control Board (CPCB), New Delhi 2006).

¹⁹¹ Ibid.

Another disturbing trend is the growth of Rural Transport Vehicles (RTVs), and a gradual shift from public to private transport. CNG buses consume more energy. IVECO, an international vehicle manufacturer, estimates that a CNG bus, which weighs 700 kg more than its Euro III diesel counterpart, consumes 25% more energy.¹⁹² As a result private transporters prefer to run a fleet of smaller vans rather than a few big buses. From 2002 to 2003 the number of RTVs plying on Delhi roads increased from 2,165 to 5,146.¹⁹³ RTVs carry between 12–16 people. Instead of using one engine to transport 60–80 people, transporters are using 4–6 engines on the roads of Delhi, thereby increasing pollution, congestion and the likelihood of accidents. It is important, as some scholars argue, that fuel policies are accompanied by other policies that ensure that use of public transport does not decrease.¹⁹⁴ The disruptions caused, increased cost of operations, increased fares in public transport appear to have led to a shift from bus use to pooled car use and private vans for school children and others.¹⁹⁵

A final issue of concern is the safety of CNG vehicles. After a series of fire incidents, the Court through the EPCA launched an investigation into the fire hazards and safety of CNG vehicles.¹⁹⁶ The EPCA-appointed expert committee found that although CNG is an inherently safe fuel, bulk/continuous releases from fuel systems can cause fire, and there is an increased likelihood of this occurring in converted and poorly maintained vehicles.¹⁹⁷ In addition a recent study on the health of DTC drivers found that the conversion to CNG, since CNG vehicles are heavier, attain higher temperatures and require more frequent gear changes than vehicles on conventional fuel, has worsened conditions for drivers, who suffer from musculo-skeletal, respiratory and neurological disorders.¹⁹⁸ The Court and the EPCA are engaged in studying and addressing these safety concerns.¹⁹⁹

6. The Issue of Sustainability

The petitioner in the *Municipal Solid Waste Management Case* says she ‘dreads the day’ her case will come up for final hearing for the ‘last thing’ she wants is a final order.²⁰⁰ As long as the Court is seized of the matter there is a ‘cloud of fear and compliance’.²⁰¹ Once a final order is passed, ‘municipal executives will

¹⁹² See supra n 180 at 152.

¹⁹³ See CPCB Newsletter, Parivesh, 32 (2003).

¹⁹⁴ D Mohan, *CNG- A Big Mistake?* Economic Times 16 April 2002.

¹⁹⁵ D Mohan, Transportation Research and Injury Prevention Programme, IIT-Delhi, in electronic discussion with the author, 10 October 2004 (estimating the number of new vans in Delhi to be in the range of 5000).

¹⁹⁶ AR Choudhary, CSE, in discussion with the author, Delhi, 13 February 2007.

¹⁹⁷ Investigation relating to fire hazards and safety in CNG Buses (Environment Pollution (Prevention and Control) Authority (EPCA), New Delhi 2006). available at: <<http://www.cpcb.nic.in/epcareport.htm>>.

¹⁹⁸ DTC drivers hit hard by CNG buses, *The Hindu*, 9 January 2007.

¹⁹⁹ AR Choudhary, CSE, in discussion with the author, Delhi, 13 February 2007. See also EPCA Reports numbered 15 and 17, available at: <<http://www.cpcb.nic.in/epcareport.htm>>.

²⁰⁰ A Patel, Petitioner and Member, Asim Barman Committee, in discussion with the author, Bangalore, 12 September 2004, and Delhi, 6 February 2007.

²⁰¹ *Ibid* on 6 February 2007.

significantly relax their efforts to clean up'.²⁰² CSE, a critical actor in the later years of the *Delhi Vehicular Pollution Case*, believes that as the executive is 'not maturing' it is not the appropriate moment for the judiciary to end its involvement with air quality.²⁰³ Yet these cases have been in the Court for over 11 and 22 years, respectively. In this period the Court has passed nearly 50 orders in the *Municipal Solid Waste Management Case* and over a hundred orders in the *Delhi Vehicular Pollution Case*. If the solutions devised in these orders are triggering, as they should, governance-related reforms, the executive would not stand in need of such constant supervision. The phenomenon of endless judicial oversight in public interest cases leads one to query whether the judiciary is merely substituting judicial governance for executive governance in areas flagged for its attention by public interest litigants.

The lengths to which the Court will go in fulfilling its 'judicial governance' task are well illustrated in the *Delhi Vehicular Pollution Case*. At one stage the Court registry was reduced to performing the duties of 'a Regional Transport Office'.²⁰⁴ The Registrars were obliged to burn the midnight oil filing the deluge of affidavits, over 27,000 in three days, submitted by transporters. These affidavits, once filed, would permit the transporters to legally ply their vehicles past the Court-ordered deadline.²⁰⁵ The Court stepped in to ensure authenticity in the process, but in so doing exposed its lack of faith in the government.²⁰⁶

The phenomenon of endless judicial oversight in public interest cases is not sustainable for several reasons. The Court has many claims on its time²⁰⁷, and the practice of continuing judicial oversight in PILs will take its toll on the smooth functioning of the judicial system. At present, the Court is able to cope, in part, because of its practice of creating Committees. Yet, as is illustrated in both the cases under consideration, the constitution, practice and functioning of these committees is determined on an *ad hoc* rather than a principled basis, and this in itself creates inconsistencies and potentially inequities.

Endless judicial oversight also leads to a reactive rather than a proactive administration. The Court takes charge, and the relevant authorities follow the judicial lead. Judicial governance becomes a crutch for the authorities. So much so that some claim 'judicial activism has restricted the growth of a responsible and independent bureaucracy'.²⁰⁸ The length of judicial oversight creates an unhealthy and tension-ridden relationship of dependence. It also places a tremendous strain on the resources of the government. Some officials estimate that the Municipal Commissioners of Delhi spend half of their working week responding to court summons requiring

²⁰² Ibid.

²⁰³ AR Choudhary, CSE, in discussion with the author, Delhi, 10 September 2004 and 13 February 2007.

²⁰⁴ See TK Rajalakshmi and V Venkatesan, *Commuter's Crisis*, 18(8) *Frontline* April 2001, 14-27 (quoting Rajeev Dhavan).

²⁰⁵ See Order dated 04/04/2001

²⁰⁶ See supra n 204.

²⁰⁷ At the end of 2005, the Supreme Court of India had 33,019 cases pending on its dockets. See Follow up and Recommendation of the All India Seminar on Judicial Reforms with Special Reference to Arrears of Court Cases, 29th and 30th April, 2005, New Delhi, Volume II, 108.

²⁰⁸ S Divan, *A Mistake of Judgment*, *Down to Earth* (30 April 1992), 51.

their 'personal appearance'.²⁰⁹ The court appearances in addition to their routine work leave them with little time to develop policy.²¹⁰

In both the cases considered the real source of sustainability lies not in the nature of the solutions devised but with the citizens. Although endless judicial oversight is neither sustainable nor desirable, oversight by empowered citizens is. The *Delhi Vehicular Pollution Case* has emerged as one of the most high profile environmental cases before the Court. The media attention surrounding the disturbing air quality statistics in Delhi, and the apparent impact of the Court-ordered CNG conversion, have raised the bar in terms of what citizens are willing to tolerate. Citizens will no longer accept 'billowing black smoke', once a frequent sight in Delhi.²¹¹ The petitioner in the *Municipal Solid Waste Management Case* describes the MSW Rules as a 'weapon in the hands of the public'.²¹² She believes the MSW Rules will provide citizens with a tool to hold their municipalities to account.²¹³

7. The Court as a Policy Evolution Forum

The Court has over time developed into a 'policy evolution forum', a role it is ill equipped to play. The nature of PIL as it has evolved in India is such that political, social and economic questions, not usually presented to judges in other countries, are decided as a matter of course by the Indian Supreme Court.²¹⁴ And, indeed the Court is viewed as a forum 'to voice the grievances of the community'.²¹⁵ The Court has in the past dabbled in policy, for instance, it defined the major premises which should govern the formulation of policy applicable to the management of railways.²¹⁶ In a few exceptional public interests cases the Court has even 'made law', a province exclusively reserved for the legislature. In *Vishaka v State of Rajasthan*²¹⁷ the Court, 'in the absence of enacted

²⁰⁹ JK Dadoo, Secretary (Environment), Government of National Capital Territory of Delhi, in discussion with the author, 15 February 2007.

²¹⁰ Ibid. One official, who wished to remain anonymous, however welcomed court supervision, arguing that a combination of short-term electoral politics and three syndromes—Not-in-my-backyard, Not-in-my-tenure and Not-in-an-election-year—leads the government to function 'mayhem to mayhem'. It would be unrealistic to expect strategic vision or proactive action. He noted that the more action-oriented government officials often welcomed, and in some cases secretly requested NGOs to file, public interest litigations. In discussion with the author, 15 February 2007.

²¹¹ B Lal, Chair, EPCA, in discussion with the author, Delhi, 9 September 2004.

²¹² A Patel, Petitioner and Member, Asim Barman Committee, in discussion with the author, Bangalore, 13 September 2004, and Delhi, 6 February 2007.

²¹³ Ibid.

²¹⁴ GH Gadbois Jr, 'The Supreme Court of India as a Political Institution', in Rajeev Dhavan et al. (ed.), *Judges and Judicial Power* (N.M. Tripathi Sweet & Maxwell, Bombay London 1985) 250, 257.

²¹⁵ *Dr P. Nalla Thampy v Union of India* (1983) 4 SCC 598, 603.

²¹⁶ Ibid. Yet the Court has also shown some reluctance to be drawn into other policy areas, for instance, the debate on economic policy and reform. In the *BALCO Disinvestment Case* the Court observed that in 'the sphere of economic policy or reform the Court is not the appropriate forum'. It added that '[e]very matter of public interest or curiosity cannot be the subject matter of PIL. Courts are not intended to and nor should they conduct the administration of the country. Courts will interfere only if there is a clear violation of Constitutional or statutory provisions or non compliance by the State with its Constitutional or statutory duties'. *BALCO Employees Union v Union of India* (2002) 2 SCC 333, 382.

²¹⁷ *Vishaka v State of Rajasthan* (1997) 6 SCC 241.

law', laid down guidelines defining sexual harassment in the workplace, and providing procedures and machinery for investigation and redress. It did so 'in exercise of the power available under Article 32 of the Constitution for enforcement of the fundamental rights'. And, it emphasised that this would be treated as the law declared by this Court under Article 141 of the Constitution.²¹⁸ It is worth noting that the Court's power under Article 141 of the Constitution²¹⁹ is to 'declare law', a power which only binds courts and tribunals throughout India. The Court does not have the power, as it has here assumed, to 'make law' binding upon all citizens of India.²²⁰

Many hackles have been raised at the repeated judicial incursions into the arena of policy-making. A private member's bill, entitled Public Interest Litigation (Regulation) Bill, 1996, tabled before the Rajya Sabha, argued that PILs were placing a heavy burden on judicial time and resources, and were being misused.²²¹ Although this Bill lapsed, it demonstrates the disaffection, at least in some quarters, with the way in which the public interest jurisdiction has evolved over time. More recently, concern, *inter alia*, over the proliferation and functioning of various Court appointed committees on diverse environmental issues, led the MOEF to draft the National Environment Tribunal Act, 2006. This Bill, which has yet to be tabled before the Parliament, proposes to set up a national and several regional environmental tribunals, and wind up existing authorities created to offer advice to the Court.²²²

There are clear reasons for such disaffection. Ronald Dworkin in *Taking Rights Seriously* drew a persuasive distinction between principle (involving moral rights against the state) and policy (involving utilitarian calculations of the public good).²²³ The former is the legitimate domain of judges and the latter that of the legislature and its agents.²²⁴ Each branch of the government is best confined to the exercise of its own function.²²⁵ Indeed in the case of the judiciary lack of

²¹⁸ Ibid.

²¹⁹ Article 141 (Law declared by the Supreme Court to be binding on all Courts) reads: The law declared by the Supreme Court shall be binding on all courts within the territory of India. The Constitution of India, 1950.

²²⁰ Supra n 1 at 204.

²²¹ See AH Desai and S Muralidhar, Public Interest Litigation: Potential and Problems in BN Kirpal et al (eds), *Supreme but not Infallible – Essays in Honour of the Supreme Court of India* (Oxford University Press, New Delhi 2000) 159.

²²² N Sethi and M Singh, *Govt plans special courts to curb SC's green blitz*, The Times of India, 19 March 2007. See also R Jayaswal and MK Venu, *Now green tribunals to look into protection laws*, The Economic Times, 10 November 2006.

²²³ R Dworkin, *Taking Rights Seriously* (Harvard University Press, Cambridge 1977) 22.

²²⁴ Ibid at 82–86

²²⁵ A pure doctrine of separation of powers might be formulated in the following way:

It is essential for the establishment and maintenance of political liberty that the government be divided into three branches or departments, the legislature, the executive and the judiciary. To each of these three branches there is a corresponding identifiable function of government, legislative, executive or judicial. Each branch of the government must be confined to the exercise of its own function and not allowed to encroach upon the functions of the other branches. Furthermore, the persons who compose these three agencies of government must be kept separate and distinct, no individual being allowed to be at the same time a member of more than one branch. In this way each of the branches will be a check to the others and no single group of people will be able to control the machinery of the State.

institutional competence and democratic accountability would suggest that it exercise caution in entering into the policy-making arena.²²⁶

A philosophy that the Indian Courts have implicitly adopted, the reason, in the words Justice Chandrachud, is that ‘the concentration of power in any one of organ may... by upsetting that fine balance between the three organs, destroy the fundamental premises of a democratic government to which we are pledged’.²²⁷ In the exercise of its public interest jurisdiction the judiciary may reach the limits of its Constitutional competence, and begin dabbling in policy-making, the exclusive domain of the democratically elected legislature. Indeed this danger was recognised as early as in *Bandhua Mukti Morcha* where Justice Pathak noted,

In the process of correcting executive error or removing legislative omission the Court can so easily find itself involved in policy making of a quality and degree characteristic of political authority, and indeed run the risk of being mistaken for one. An excessively political role identifiable with political governance betrays the court into functions alien to its fundamental to its character, and tends to destroy the delicate balance envisaged in our constitutional system between its three basic institutions.²²⁸

Yet the trajectory that the Indian judiciary is on will certainly lead it magnetically towards policy making, and indeed governance. The phenomenon of potentially endless judicial oversight in public interest cases, as illustrated in the *Municipal Solid Waste Management* and *Delhi Vehicular Pollution Cases* cannot but lead one to the suspicion that the judiciary is merely substituting judicial governance for executive governance in areas highlighted by public interest litigants. A phenomenon some scholars would contend is ‘judicial excessivism’ or judicial overactivism. S.P. Sathe argues that ‘[Judicial] activism... is excessivism when a court undertakes responsibilities normally discharged by other co-ordinate organs of the government’.²²⁹ The *Delhi Vehicular Pollution* and *Municipal Solid Waste Management Cases* offer excellent examples. In the *Delhi Vehicular Pollution Case* the Court, instead of directing the Central government to use its statutory powers to control air pollution throughout the country, established itself as the main protector of the environment.²³⁰ The Court thereafter ruled through interim

Vile proceeds to state that, ‘[t]he doctrine has rarely been held in this extreme form, and even more rarely put into practice, but it does represent a “benchmark” or an “ideal-type”...’ See MJC Vile, *Constitutionalism and the Separation of Powers* (2nd edn 1998) 14.

Although there is no rigid separation of powers in the Indian Constitution, there is broad separation of functions and ‘a system of salutary checks and balances’. The reason for this broad separation of power is that ‘the concentration of power in any one of organ may... by upsetting that fine balance between the three organs, destroy the fundamental premises of a democratic government to which we are pledged’. See *Indira Nehru Gandhi v Raj Narain* (Clarendon Press, Oxford 1975) Supp SCC1, 260.

²²⁶ Ronald Dworkin, *Taking Rights Seriously* 85 (arguing that ‘policy decisions must... be made through the operation of some political process designed to produce an accurate expression of the different interests that should be taken into account. The political system of representative democracy may work only indifferently in this respect, but it works better than a system that allows non elected judges, who have no mailbag or lobbyists or pressure groups, to compromise competing interests in their chambers’.)

²²⁷ See *Indira Nehru Gandhi v Raj Narain* (1975) Supp SCC 1.

²²⁸ *Bandhua Mukti Morcha v Union of India* (1984) 3 SCC 161 at 232.

²²⁹ SP Sathe, ‘Judicial activism: the Indian experience’, (2001) 29 W UJLP 40.

²³⁰ A Rosencranz and M Jackson, ‘The Delhi Pollution Case: The Supreme Court of India and the limits of judicial power’, *Columbia Journal of Environmental Law* (2003) 28 CJEL 223, 249.

orders and directions, a phenomenon Upendra Baxi terms as, 'creeping jurisdiction'.²³¹ It resolved issues, and moved from first generation to second generation reforms in air quality. In the *Municipal Solid Waste Management Case* the Court moved on from the MSW Rules to monitor their implementation. In neither case is closure in sight. Such long-term judicial oversight can have debilitating effects on the executive's confidence, its ability to act proactively, and to discharge its function. It can also, in extreme cases, destabilize institutions, governance procedures and trust in systems.²³²

Policy, environmental and social, must emerge from a socio political process and must be considered in a legislative forum not a judicial one. Numerous problems brought before the Court by public interest litigants are, what L.L. Fuller would term, 'polycentric disputes', disputes which 'involve many affected parties and a somewhat fluid state of affairs'.²³³ This is certainly the case with both the *Municipal Solid Waste Management* and *Delhi Vehicular Pollution* cases. There are usually 'complex repercussions' to intervention in such situations,²³⁴ as not all affected parties are readily identifiable and therefore before the Court. Given the limited participation of those affected by the disputes the Court cannot be sure of the extent of repercussions or of their legal irrelevance. The profound impact on waste-pickers in the *Municipal Solid Waste Case* and on small transporters and daily-wage commuters in the *Delhi Vehicular Pollution Case* substantiate this point. Fuller advocates delimiting adjudication in such cases.²³⁵

8. Conclusion

Judicial activism and PIL has long been acknowledged as a testament to Indian democracy, and an invaluable tool in addressing executive inaction. In both the *Municipal Solid Waste Management* and *Delhi Vehicular Pollution* cases judicial oversight led to alerting slumbering institutions, changes in policy as well as rules, and arguably, to visible improvements in solid waste management in cities and air quality in Delhi. Indeed, judicial intervention resulted in improved governance and delivery of public services, and enhanced accountability of public servants. Little wonder then that the courts are the natural choice for individuals who wish to direct the executive to perform its duties.

²³¹ U Baxi, 'Taking suffering seriously: social action litigation in the Supreme Court of India in Rajeev Dhavan et al (eds), *Judges and Judicial Power* 289 (1985) 298–300.

²³² See supra n 194.

²³³ See LL Fuller, 'The forms and limits of adjudication', (1978) 92 *Harvard Law Review* 353, 395, 397. Fuller illustrates this concept through the analogy of a spider's web: 'A pull on one strand will distribute tensions after a complicated pattern throughout the web as a whole. Doubling the original pull will, in all likelihood, not simply double each of the resulting tensions but will rather create a different complicated pattern of tensions. This would certainly occur, for example, if the doubled pull caused one or more of their weaker strands to snap. This is a 'polycentric' situation because it is 'many centered'—each crossing of strands is a distinct center for distributing tensions'. See also JWF Allison, Fuller's Analysis of polycentric disputes and the limits of adjudication, (1994) 53 *CLJ* 367.

²³⁴ Ibid at 394–5; See also *Steadman v Steadman* [1976] A.C. 536, 542 (Lord Reid arguing that 'Judges ought not to develop the law because 'it would be impracticable to foresee all the consequences of tampering with it').

²³⁵ Ibid.

Yet, the improved governance triggered by these litigations has not yet led to governance-related reform, the improved delivery of public services has not yet been institutionalised, and the enhanced accountability of public servants has been imposed in a situation of limited technical, financial and infrastructural capacity. Further, despite the best intentions, the Court set in motion processes that were less than participatory, which therefore arguably led to solutions that were less than fair, just and impartial to all the stake-holders. The solutions have also been criticised in some quarters as ineffective and unsustainable.

More broadly, the growth of judicial activism and PIL has led to concerns that: the judges and their predilections play far too significant a role in the shape the litigations take; the leverage particular litigants have with the Court results in converting one strain of opinion into policy while annihilating others; the Court merely substitutes executive governance with judicial governance in sectors highlighted by public interest litigants; and the Court has over time developed into a 'policy evolution fora', a role it is ill-equipped to play. These concerns, real or perceived, reveal certain disaffection with the judicial process which needs to be addressed for PILs to be both effective and equitable.

Most jurisdictions address excessive PIL, as well as the undesirable by-products thereof, either by restricting standing and/or crafting judicial rules to limit the character and number of public interest cases brought before the apex judicial body.²³⁶ Although the Indian Supreme Court has resisted going down this path, it has had occasion to ponder over the regulation of PIL. At the time when the PIL (Regulation) Bill, 1996, referred to earlier, lapsed, the Chief Justice set up a committee to revise the Supreme Court Rules²³⁷ to introduce, *inter alia*, a chapter on PIL.²³⁸ The chapter was designed to ensure 'uniformity' in PIL.²³⁹ The committee submitted its report in the late 1990s but the Rules were not amended. Notwithstanding this display of reluctance, and the admitted circularity in relying on the Court, subject to intense scrutiny thus far, to restrain itself, the Court is the preferable agent for change. The Court recognises that there are limits to public interest jurisdiction. In its words, '[w]ith the passage of time PIL jurisdiction has been ballooning... [b]ut the balloon should not be inflated so much that it bursts'.²⁴⁰ It accepts the need for judicial restraint.²⁴¹ It cautions that the public interest weapon must be 'utilised and invoked by the court with a great deal of

²³⁶ The South African Constitutional Court, for instance, has developed the following rules: the court should not ordinarily act as both the court of first and last resort; applicants for direct access should show that they have exhausted all other remedies and procedures; and, the applicant must have reasonable prospect of success based on the substantive merits of the case. See Jackie Dugard and Theunis Roux, 'Record of the South African Constitutional Court in providing an Institutional Voice for the Poor: 1995–2004' in Gargarella, Domingo and Roux (eds), *Courts and Social Transformation in New Democracies* (Ashgate Publishing, Hampshire 2006) 107.

²³⁷ The Supreme Court Rules, 1966.

²³⁸ *R.C. Ghia Memorial Lecture: The Constitutional Obligation of the Judiciary*, delivered by JS Verma, Chief Justice of India (1997) 7 SCC (Jour) 1. B. Jairaj, Consumer Action Group, suggested that the Committee was established primarily to create the political environment for the Bill to lapse, in discussion with the author, 6 March 2007.

²³⁹ *Ibid.*

²⁴⁰ *Supra* n 243.

²⁴¹ *Sachidanand Pandey v State of West Bengal* (1987) 2 SCC 295, 334.

circumspection and caution'.²⁴² It is, in particular, on guard against 'PIL', 'private inquisitiveness litigation',²⁴³ personal interest litigation²⁴⁴, vexatious/frivolous litigation²⁴⁵ and politically motivated litigation.²⁴⁶ The Court is then perhaps a hair's breadth away from devising guidelines to deal with PILs that exhibit none of these characteristics but nevertheless strain the resources of the court, and distort, however unintentionally, the process of decision-making.

The Court would be well advised to evolve a set of guidelines for restrained and responsible PIL. These guidelines should aim at ensuring that PILs are: widely representative, that is, they speak on behalf of the community, and across social divisions (with a specific focus on the poor and marginalised), and based on extensive capacity-building among communities; broadly equitable, that is, they are mindful of undesirable impacts on certain groups, in particular poor and marginalised groups, and certain rights, such as rights to livelihood, housing and similar; effective, that is, they lead to the most responsible, cost-effective and efficient solutions in the circumstances; sustainable, that is, they are available at all times, and lead to long-term solutions rather than quick-fixes; and consistent, that is, they lead to predictable and consistent outcomes. These guidelines should also aim to both limit and systematise the creation and functioning of court-appointed committees and authorities. Arduous as the process of evolving these guidelines seems, it may take the beneficent effect of such guidelines to unleash the promise of PIL.

²⁴² *Chhetriya Pardushan Mukti Sangarsh Samiti v State of Uttar Pradesh* (1990) 4 SCC 449.

²⁴³ *Narmada Bachao Andolan v Union of India* (2000) 10 SCC 664, 762.

²⁴⁴ *Subhash Kumar v State of Bihar* (1991) 1 SCC 598, 604.

²⁴⁵ *Janata Dal v H. S. Chowdhury* (1992) 4 SCC 305.

²⁴⁶ *Simranjit Singh Mann v Union of India* (1992) 4 SCC 653.

ENVIRONMENTAL JUSTICE: COURTS & BEYOND

*M K Ramesh**

INTRODUCTION

Given the fact of poor and ill-conceived nature of law and ill-equipped administrative apparatus in wrestling with the twin challenges of meeting the demands of development and the concerns of environmental conservation and protection,¹ attention naturally turns towards the third limb of the government - the judiciary - to examine its role in Environmental governance. This paper proposes to examine the role of judiciary at two levels: as facilitator and catalyst of better enforcement of laws and as pathfinder to the administration and panacea to environmental ills in India. This is followed by a critical overview of the downside of the formal frame, as symbolised by the hierarchy of Courts. The analysis ends off with the need to explore, recognise and evolve alternatives not as supplants and substitutes, but more as additional tools and techniques to broad-base environmental justice delivery in the country.²

JUDICIAL FACILITATION OF GOOD ENVIRONMENTAL GOVERNANCE: COMPLEMENTING & CATALYSING ENFORCEMENT

The enquiry, more specifically, as attempted in this chapter, is to find out whether the Courts of law have played a complementary role as to make the environmental administration more effective and efficient. The higher judiciary has, as could be seen from the following, often times, supplied the details of procedures to be adopted in implementing a law; overseen the stages and processes of enforcement; clarified doubts as to the circumstances when the discretionary power of administrator be put to use; facilitated inquiry to enable the enforcer find facts and with the help of expert advice, strengthened implementation in a more effective way.

JUDICIAL INNOVATIONS

Innovativeness, in putting to use the existing tools of justice delivery to facilitate better administration, has been the hallmark of judicial intervention over environmental issues. Reference to the following devices employed by the Courts, by way of illustration, would substantiate the observation :

Guidelines for Implementation:

By setting a detailed set of procedural guidelines for implementation, the Courts have constructively contributed for better enforcement. This can be illustrated by reference to what the Gujarat High Court evolved in relation to Public Hearing³ process. The notifica-

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1 See M K Ramesh, "Environmental Justice Delivery in India: In Context," 2 IJEL 2 (2001) 10.

2 Broadbasing environmental justice delivery system is the subject matter for a separate study.

3 First issued S.O. 318(E), Apr. 19, 1997; Gazette of India, Extra, Part II, Sec. 3(ii), Apr. 10, 1997, pp 3-4, No. 244 (No. 2012013/4189-1A.I).

tion on Public Hearing, was devised by the Minister of Environment & Forests, Government of India, to provide an opportunity for the local people to get to know about and participate in the process of decision making over developmental activities that are likely to affect their lives. It involves a specific process of eliciting suggestions, views, comments and objections by all the concerned. Existence of wide discretionary power in favour of the district administration in the choice of the method and manner of conduct of the process had resulted in its abuse and neglect. These, at times, gave the impression of enactment of a farcical drama. This prompted a public spirited action group approach the Gujarat High Court seeking its intervention to uphold the spirit of the law. The Court responded positively by enunciating a set of guidelines for proper conduct of Public Hearing.⁴

The order issued by the Court is, indeed, a model for the administration for its clarity and lucidity as to the stages in the implementation of the law on the point. It spelt out with great detail the most appropriate way of going about the process and the nature of preparation required for the same. It covered details as to the most suitable place of conduct of public hearing; the nature of publication of information about it; the kind and the quality of information to be made available for public scrutiny before the commencement of the process; the quorum and the nature of composition of the committee; making available information of the follow-up action leading ultimately to providing the gist of the environmental clearance and the like.⁵ While the primary obligation of working out the details of procedures for implementation remains with the administration, inconsistency and non-uniformity in their adoption and the cavalier attitude in the organization of the activity in its entirety compelled the court to intervene in working out the details of procedure. The outcome was, indeed, a welcome one as it enabled the administration to minimise arbitrariness in the Public Hearing process.

Continuing Mandamus

In any given case, as a general rule, once the judgment is passed it is left to the administration to execute the judgment so as to give effect to it. In the judgment, though the court issues directions to the agencies of the state as to how its decision has to be implemented, it will not be there to oversee its actual execution. Nor, would the court examine the extent of its implementation and the nature of its impact. The enforcement agencies, in a number of instances that involve public interest, are found to have taken advantage by postponing or not implementing decisions, under one excuse or another. It became a common phenomena, compelling the very people who successfully fought the case earlier, to approach the court again and again to activate an unwilling and recalcitrant administration in order to give effect to the judgment. So, while the judgments on a number of litigations in public interest were hailed as path-breaking, the misery and suffering of people, to ameliorate which the court was approached, continued unabated. complacency, indifference and casual approach to human problems continued without much perceivable change, notwithstanding great judgments. This promoted the higher judiciary in recent times, to come up with

⁴ *Centre for Social Justice v. Union of India*, Spl. Leave Appln. No. 8529 of 1999, Gujarat High Court.

⁵ *Ibid.*

yet another innovation: *continuing mandamus*.⁶ The technique adopted by the court is quite simple. Instead of passing a judgment and closing the case, the court would issue a series of directions to the administration, to implement within a time-frame, and report back to court from time to time about the progress in implementation. This, in a way, has helped people not turn cynical to landmark judgments rendered un-implementable or suffering the ignominy of non-implementation. The other advantage, more importantly, has been the extending of scope for the administration to be strengthened with the directions of the court, at every stage and clear the hurdles for effective implementation. This has further opened the avenue for the administration to plead with the court to revisit and modify its earlier directions, to make them more effectively implementable.

The case on point is the one concerning Vehicular Pollution.⁷ It started in 1985 as a case seeking directions from the apex court for closure of industries responsible for health hazards and to regulate pollution of the air caused by automobiles plying on the roads of Delhi and thermal power plant there.⁸ The case is yet to be finally decided. Instead, a series of orders passed by the Supreme Court that concern controlling vehicular pollution, is still in different stages of implementation.⁹ The court adopted a novel method in making the administration work. It made the government create a think tank, seek and secure expert opinion, make preparations for implementation of directions and report at every stage the progress made in achieving the objective. It was indeed an effort by the judiciary to assist, partner and guide the administration in cleaning the atmosphere of Delhi and present a model for the rest of the country to emulate.¹⁰

⁶ In *Vineet Narrain v. Union of India and Anr.*, 1997(7) SCALE 656, popularly known as the 'Hawala case', the Supreme Court adopted this technique which enabled it to closely monitor investigations by Government agencies, in respect of serious accusation made against prominent personalities. According to the court, the innovation was a procedure within the constitutional scheme of judicial review to permit intervention by the court on the complaint of inertia by the Central Bureau of Investigation and to find solution to the problems.

⁷ *M.C. Mehta v. UOI*, wrt.ptn. (Civil) No. 13029 of 1985.

⁸ *M.C. Mehta v. UOI* (Vehicular pollution case), 1991 (2) SCC 353.

⁹ Some of the significant orders issued by the Court are the following: (i) clarification given as to the jurisdiction of the Environment Pollution (Prevention and Control) Authority for the National Capital Region (EPPCA), to extend to all aspects of environmental pollution in the region (AIR 1998 SC 617 & 773); (ii) Instruction issued to the Union Ministry of Environment and Forests to test the appropriateness of the suggested pollution control device (order dt. 14 Nov. 1990); (iii) Direction given to the Union Government to set up a high power committee to examine and recommend, in a comprehensive way, the technological, administrative and legal solutions for dealing with Vehicular Pollution; (iv) Directions to Government to ensure new vehicles were fitted with catalytic converters and lead free petrol was introduced in four metropolitan cities by April, 1995 (Orders dated 12.8.1994, 21.10.1994 and 28.3.1995, reported at 1997 (4) SCALE 4 (SP), 1997 (4) SCALE 5 (SP & 1997(4) SCALE 6 (SP)); (v) Direction to Central Government to convert its vehicles to operate on compressed Natural Gas (CNG) (Order dt. 26.4.1996, reported at 1997(4) SCALE 7 (SP)), (vi) Endorsement of the suggestions of EPPCA like, fixing a time-frame for elimination of aged vehicles from operating on roads etc. (1998 (6) SCC 63 and AIR 1999 SC 291) and (vii) Imposition of Super norms (Bharat Stage I and Bharat Stage II norms on the lines of Euro I and Euro II Norms) for vehicles registered in the National Capital Region (1999(6) SCC 12 & 14).

¹⁰ It is another matter that the court, in its enthusiasm to present such a model, got itself mired in the complexities of a problem that was at once political, economic and technological in nature. For a fairly detailed analysis of the case, See, Shyam Divan & Armin Rosencranz, *Environmental Law & Policy in India*, Oxford University Press, New Delhi (2001) 2nd Ed, pp.274-279. (hereafter Divan & Rosencranz).

Finding Facts

With the relaxation of procedural requirements in presentation of petitions in public interest, the higher judiciary began receiving complaints that required further probing, to be entertained as cases fit for its consideration. The administration in question, under such circumstances, were either not forthcoming or found themselves deficient in supplying the required information for the court to arrive at a decision. In order to enable the administration to keep their records upto date, while deliberating to take developmental decisions and function effectively, the courts began instructing the government to appoint fact-finding bodies and to follow it up with action or receipt of the report.

In *Banwasi Seva Ashram v. State of Uttar Pradesh*,¹¹ the complaint concerned efforts in the eviction of the inhabitants of the forest area by the Government, ignoring their claims, with the ostensible object of creating a reserve forest. The Supreme Court instructed the State Government to constitute a high powered Committee, to investigate the claims. Dubbing the already existing one as a biased committee, it ordered for a new one to be put in place. It even gave suggestion as to the composition of the body, so that it acted objectively and impartially. Upon being informed by the State Government, of making available the land under contention to the National Thermal Power Corporation (NTPC), the Court allowed for such a transfer only after extracting an assurance from the latter to provide certain facilities approved by it. The Court set out in detail the kind of safeguards to be taken to rehabilitate the oustees.¹² The rehabilitation package evolved by the highest court, indeed, became a model for the NTPC to later develop its own policy of Resettlement and Rehabilitation.¹³

Amicus Curiae (Friend of the Court) :

Over a number of public interest issues, the Courts of Law, have put to use the services of Law Practitioners as to extend beyond offering services to the parties to the suit. Especially in environmental litigations, there have been increasing instances of their getting entrusted with the functions of *amicus curiae*, to assist the Court to peruse, analyse and collate materials submitted by the parties. They may also be required to do research and make submissions to the Court on points of law. This assistance in tackling complex environmental and policy issues, has without doubt helped the Court of Law pay focussed attention to the issues on hand. Moreover, this device is of great utility in opening up fresh avenues for the parties, especially the administration, to freely interact, in an informal atmosphere and secure environmental justice.

The ecological problems created by stone crushing in the hills around Shimla (like devastation of forests; landslides and choking of hydrological systems), made the Himachal Pradesh High Court appoint a team of practitioners of law as *amicus curiae* to study the situation and evolve a legal solution, in the case of *Court on its Own Motion v. State of Himachal Pradesh*.¹⁴ This measure helped the court to frame a scheme to protect the eco-systems of the region while at the same time ensuring the economic interests of the quarry contractors were not adversely affected.

¹¹ AIR 1987 SC 374.

¹² *Ibid* at 378.

¹³ For the Text, See *Rehabilitation policy & Law in India: A Right to Livelihood*, Fernandes W. and Paranjpye V. (Eds) Indian Social Institute, New Delhi 91997), at Pp. 331-344.

¹⁴ 1994, FOR.L.T. 103.

Special Commissions and Expert Opinions

In ascertaining facts, the Courts may, at times require the authorities to make available certain information through affidavits. When the Higher Judiciary is of the opinion that the information furnished is deficient, unreliable or unhelpful or when the concerned agency is not forthcoming in giving the information required, it may appoint Special Commissions to gather the required information and expert committees to examine scientific questions. Such appointments are made in exercise of inherent powers existing in the High Courts and Supreme Courts.¹⁵ The reports and findings so secured are invariably treated as *prima facie* evidence. In *L.K. Koolwal v State of Rajasthan*,¹⁶ the Rajasthan High Court relied upon the report about the unsanitary conditions in different parts of Jaipur, as submitted by the Commissioner appointed by it.

The *Irish Butter* case,¹⁷ involved enlisting of expert opinion. It was charged that the butter imported by the governmental agency for distribution in Bombay was irradiated on account of the Chernobyl disaster. The Supreme Court released the butter for distribution only after the expert committee reported that the butter was safe from contamination. Special Commissions and Expert Committees have not just been approached only for the purpose of getting expert opinion.¹⁸ They have, at times, been employed for the purpose of overseeing the implementation of the orders of the Court as well.¹⁹

Orders & Directions

Issuance of clear and specific orders for execution, resulting in tangible results has made judicial intervention effective and significant. They also, in a way, helped the administration perform their functions, effectively and without hindrance. These have, indeed, been very helpful for the administration do their duties without fear or favour. The host of orders and directions issued in *T.N. Godavarman Thirumulkpad v. Union of India*,²⁰ present a classic and illustrative example. Freezing all wood-based industries; regulating felling ; use and movement of timber across the country, catalysing the process of clear demarcation and recording of forested areas and many more forest conservation activities were achieved through this process.²¹

Jurisdiction Grabbing ?

These efforts of the higher judiciary are, without doubt, unprecedented. The measures appear to be an invasion over the administrative terrain. The courts, however, have denied any such usurpation. In their pronouncements,²² they have justified their action either

¹⁵ Under Articles. 226 & 32 of the Constitution respectively.

¹⁶ AIR 1988 RAJ 2.

¹⁷ *Shivarao Shantaram Wagle v. Union of India*, AIR 1988 SC 952

¹⁸ In *M.C. Mehta v. UOI*, (Shriram Gas Leak Case), AIR 1987 SC 965 at 969, the Nilay Choudhary Committee was not only involved in advising the Supreme Court about the dangers of operation of the industry, it was also asked to suggest measures to reduce the environmental threats the plant posed.

¹⁹ In *Rural Litigation & Entitlement Kendra, Dehradun v. State of U.P.*, (Doon Valley Litigation), AIR 1988 SC 2187, an expert committee evaluated the environmental impact of limestone quarrying operations in the region besides supervising the execution of the orders of the Court. A few of other committees appointed by the Court followed closely the reforestation measures undertaken by the Miners and the process of rehabilitation of miners whose business operations were closed without payment of compensation.

²⁰ AIR 1997 SC 1228

²¹ For a detailed analysis and excerpting of the orders and directions issued by the Supreme Court in the case See, Divan & Rosencranz, *Supra*, n. 10 294-308.

under a statutory provision²³ or as an aspect of their inherent powers.²⁴ It is undeniable that the devices employed by the higher judiciary secured details of facts (when the information made available turned out to be sketchy), overcame complexities of social, economic and scientific issues (through expert testimony) and ensured continuous supervision of its orders. Environmental administration got a shot in the arm through such judicial interventions and innovations.

P.I.L. TO CURE ENVIRONMENTAL ILLS: AN EVALUATION

PIL, HUMAN RIGHTS & ENVIRONMENTAL JUSTICE

The constant increase in policy and administrative interventions of the higher judiciary is due to a variety of factors like - reposition of confidence in them by the litigating members of public, as the final resort of justice; - as a matter of sheer necessity to activate and make the administration function well²⁵ and - as an aspect of its legal and constitutional obligation of rendering justice.²⁶ The most commonly used vehicle for this purpose has been the instrument of Public Interest Litigation (PIL).²⁷ This has been by and large, a post-Emergency phenomenon in India.

The National Emergency declared in 1975 suspended all the political and civil rights of citizens. Soon after the Emergency was lifted, a group of activist judges at the highest court, in their attempt to reassert the institutional credibility as the protector of peoples' rights and to curb excesses of State, through the device of PIL, virtually opened the doors of the court entertaining petitions in public interest. The inspiration to Indian judiciary for the employment of this tool was, indeed, the post-World War II liberalism and the broad-basing of public interest law actions by the Supreme Court of United States.²⁸ More specifically, the manner in which Chief Justice Warren dealt with the problems of desegregation, discrimination and zoning through affirmative action in *Brown v. Board of Education*,²⁹ is believed to have given the required impetus for Public Service Lawyering everywhere. In course of time, PIL encompassed a wide range of issues including problems concerning environmental protection. The contributions of the Indian Supreme Court,

²² For instance, in *Bonded Labourer's case*, AIR 1984 SC 802.

²³ Order XXVI CPC and Order XLVI of Supreme Court Rules, 1966.

²⁴ Inherent power of the Supreme Court under Arts. 32 and of the High Courts under Art. 226 of the Constitution. See, *L.K. Koolwal v. State of Rajasthan*, AIR 1988 RAJ 2.

²⁵ Chs. II & III. See, n.1.

²⁶ This aspect is dealt in detail in this part of the paper.

²⁷ In the Indian context, some of the legal scholars prefer the expression "Social Action Litigation" to "Public Interest Litigation", as this tool for justice to protect basic rights of individuals and communities has, through innovations of higher judiciary in India, for richer content in both substantive and procedural aspects of law for greater positive impacts on the social lives of the people in India than the United States, where the PIL movement took roots. See, Baxi, Upendra, "Taking Suffering Seriously: Social Action Litigation in the Supreme Court of India," in Tiruchelvan & Coomaraswamy, (Eds.) *The Role of the Judiciary in Plural Societies* (London, 1987).

²⁸ See, Chayes, "Foreword : Public Law & Litigation and the Burger Court," 96 *Harvard Law Review* 4 (1982) ; See, *Sheela Barse v. U.O.I.*, AIR 1988 SC 2211.

²⁹ 349 U.S. 294 (1955).

followed and developed by the High Courts in different states, in this regard, is perceived as a broader judicial commitment to rectify the failure of other branches of government.³⁰

It must be noted here that while the higher judiciary in India is still expanding its proactive environmental friendly jurisdiction, its counterpart in the U.S. is in retreat, as evidenced in the case of *Steel Company, AKA Chicago Steel and Pickling Company v. Citizens for Better Environment*.³¹ The Supreme Court of U.S. denied standing and refused to exercise jurisdiction to a citizens suit for violations in the part by industries that failed to file timely reports of storage of toxic and hazardous chemicals. The following analysis of the use of the PIL device by the courts of law, for rendering environmental justice, attempts to highlight its positive and negative features.

POSITIVE ASPECTS

The positive impact of judicial intervention in relation to environmental problems has been such that it has dramatically transformed the form and substance of legal landscape in India. It has impacted the characterization of individual and collective rights guaranteed under the Constitution and the procedures established by law and practice in accessing them. This has also been responsible for creation of evolving new rights, approaches and principles to secure them.

Elevating Environmental problems to the status of violation of Fundamental Rights

The credit for the creation of a host of environmental rights and enforce them as fundamental rights, goes to the higher judiciary in India. This is very significant, as one learns from experiences elsewhere. The legal system may guarantee a Constitutional right to Environment and statutes may accord the right to participate in Environmental protection. However, when no tools for their protection is made available, then they are as good as non-existent. This is the experience in Spain,³² Portugal,³³ Brazil³⁴ and Ecuador.³⁵ Indian experience contrasts very significantly from this. There is no direct articulation of the Right to Environment anywhere in the Constitution or, for that matter, in any of the laws concerning environmental management in India. But this has been seized from below, by activist lawyers, motivating the courts to find and construct environmental rights from the available legal material. The salutary effect of such an articulation is of insulating the right, like any other fundamental right, from any legislative prescription or administrative

³⁰ Francois Du Bois, "Social Justice & Judicial Enforcement of Environmental Rights & Duties", in Boyle & Anderson, (Eds.) *Human Rights Approaches to Environmental Protection*, Clarendon Press, Oxford (1998), at p. 156.

³¹ U.S. Supreme Court dt. 4 Mar. 1998.

³² Art. 45, Para 1, contains a right to enjoy an "environment suitable for the development of the person". It is more of a statement of policy, disguised in the language of rights. Similarly are the provisions worded in the constitutions of Austria, Greece and Netherlands, without really providing a means for their enforcement. See, S. Douglas - Scott, "Environmental Rights in the European Union - participatory Democracy or Democratic Deficit", in Boyle & Anderson (Eds.), *supra*, n.24, at pp. 110-111.

³³ Art. 66. It has a very limited individual action to enforce it. See, S. Douglas - Scott, *Ibid*.

³⁴ Art. 335 recognizes the collective right to a balanced environment. The enforcement of the right is not in the hands of either the individual or the collectivity. See, Edesio Fernandes, "Constitutional Environmental Rights in Brazil", in Boyle & Anderson(Eds.) *Supra*, n. 24 at 276-284.

³⁵ Art. 19(2) guarantees the fundamental human right to an environment free from contamination, with out prejudice to other rights necessary for a complete moral and material development. No substantive tools exist for their protection. See, Adriana Fabra, "Indigenous Peoples, Environmental Degradation and Human Rights: A Case Study", in Boyle & Anderson (Eds.) *Supra* n. 24 at p. 251.

action leading to its violation. Constitutional remedies, in the form of *writs*, are available for any violation of the right. One may approach the higher judiciary directly by challenging the state action for its violation.³⁶

What the courts have achieved in a little over a decade and half, is to view the fundamental right to life³⁷ to include different strands of Environmental rights, that are at once individual and collective in character. Thus, in the *Doon Valley Litigation*,³⁸ the Supreme Court found the indiscriminate granting of licences to limestone quarries, that resulted in soil erosion, deforestation and silting of river beds, as affecting “the right of the people to live in a healthy environment with minimal disturbance of the ecological balance.”³⁹ Several High courts observed that environmental degradation amounted to the violation of fundamental right to life.⁴⁰

The content of the right, from its vague and general formulations, began getting viewed in far more clearer terms as the courts started addressing specific environmental problems. In a cluster of cases, it was considered as a right to protection of human health.⁴¹ Pollution free air and water as an aspect of the right got articulated in a few others.⁴² From characterising the right in a negative sounding obligation, the Courts have come up with the imposition of a positive obligation upon the State as to ensure enjoyment of the right to fresh, clean and potable water.⁴³ In *Mathew Lucose v. Kerala State Pollution Control Board*,⁴⁴ the Kerala High Court went a step ahead by holding that the discharge of effluents by a chemical industry, even when it was on one’s own premises, as violating the right to “clean air, water and wholesome environment.” An effort of municipal corporation to convert the land earmarked for a residential park into building a housing complex was thwarted by the Andhra Pradesh High Court. Such a measure, the court felt, was tantamount to violating the fundamental right to live in a well-planned hygienic environment.⁴⁵

Expanding Horizons of Human Rights

The courts, in the protection of the environment, through the device of PIL, have not found themselves shackled by the need to tag on to human rights alone. As a matter of fact, they have used human rights as a just vehicle to drive home the point of the close nexus between protection of environmental and human rights, unplanned economic activity that would affect either of the two have drawn court’s censure. This approach encompasses conservation of specific eco-systems, protection of other life forms and a holistic perspective of environmental management. In the *Centre for Environmental Law v. State of Orissa*,⁴⁶

³⁶ Art. 32 to approach the Supreme Court and Art. 226 in accessing the High Court of a State.

³⁷ Art. 21

³⁸ *Rural Litigation & Entitlement Kendra v. State of U.P.*, AIR 1985 SC 652

³⁹ *Ibid* at 656

⁴⁰ See, *Arvind Textiles v. State of Rajasthan*, AIR 1994 RAJ 195 AT 197 ; See, *Madhavi v. Tilakan*, 1988 (2) KER.L.T. 730 at 731 ; See, *Kinkri Devi v. State of Himachal Pradesh*, AIR 1988 HP 4 at 9 ; See, *V. Lakshmiipathy v. State of Karnataka*, AIR 1994 KAR 57 at 67 ; and See, *K.C. Malhotra v. State of Madhya Pradesh*, AIR 1994 MP 48 at 52

⁴¹ In *Koolwal v. Rajasthan*, AIR 1988 Raj 2, poor sanitary conditions in the city of Jaipur was considered to be in violation of the right to human health. Similarly, in *Virender Gaur v. State of Haryana* 1995(2) SCC 577, hygienic environment was regarded as an integral facet of right to healthy life.

⁴² See, *Charan Lal Sahu v. UOI* AIR 1990 SC 1480

⁴³ See, *Attakaya Thangal v UOI*, AIR 1990(1) KER L.T. 580

⁴⁴ 1990(2) KER L.R. 686

⁴⁵ *T. Damodar Rao v. S.O. Municipal Corporation of Hyderabad*, AIR 1987 AP 171

⁴⁶ 1998(86) CLT 247

a number of instructions were issued for the governmental agencies to observe while permitting any activity within the Bhitarakarnika Wildlife Sanctuary. The instructions were aimed at protecting the flora and fauna that were endemic to the region. In another case, the proposal for the Establishment of World Trade Centre on wetlands did not find favour with the Calcutta High Court, as such a move would have adversely affected the integrity of a very special eco-system.⁴⁷

Environment-friendly activities that protected traditional rights of people found favour of the courts of law in a number of instances. The *Aqua Culture* cases,⁴⁸ exemplify this stand of the judiciary, in which a number of directions were issued to caution against the practice of intense aqua-farming that violated a number of principles of good environmental management while, at the same time, encouraging promotion of traditional aqua-farming methods.

Protection of lives of birds, animals and wildlife and prevention of injury to them, both under Wildlife law and as an aspect of Environmental right, have engaged the attention of the superior Courts. Trading in articles of ivory, according to the court, under the Constitution, was akin to the pernicious activity of dealing in drugs and intoxicants. Trade and business at the cost of disrupting life forms and linkages necessary for the conservation of biodiversity and ecosystems, invited judicial censure and prohibition.⁴⁹

When the environmental right apparently conflicted with certain fundamental rights, especially the freedom of trade, profession or calling,⁵⁰ the courts have interpreted that the enforcement of public health care measures of ordering the closure of an industry for the release of polluted water into streets, as a reasonable restriction in public interest.⁵¹

Recognition of Customary Rights

The PIL tool has been employed by the Courts not just to enhance the status of a statutory right to that of a fundamental right, but to accommodate even traditional and customary entitlements to that status, as well. Thus, while in Gujarat, the diversion of a common grazing land was stalled⁵² and in Uttar Pradesh, the meadows and pasture lands in Garhwal region were prevented from being put to use to construct tourist lodges.⁵³

Protecting the interests of tribals and conserving forests

At times the judiciary, through their imaginative interpretation of laws, has been able to harmonize the interests of the forest-dwelling community with that of the concerns for conservation of the forests. In *Fatesang Gimba Vasava v. State of Gujarat*,⁵⁴ the legally recognized right of the tribals to obtain bamboo and earn livelihood by selling the articles made out of them, was attempted to be rendered unenforceable by the forest department

⁴⁷ *People United for Better Living in Calcutta v. State of West Bengal*, AIR 1993 Cal. 215. The project was later permitted to take off after the court was satisfied of safeguards proposed for environmental protection. See, Divan & Rosencranz, *Supra* n. 10 at p. 507.

⁴⁸ See, *S. Jagannath v. UOI*, 1997 2 SCC 87; *Gopi Aqua Farms v. UOI*, 1997 6 SCC 577 and *Kholamuhana Primary Fisherman Cooperative Society & Ors. v. State of Orissa*, AIR 1994 Ori. 191.

⁴⁹ *Ivory Traders and Manufacturers Association v. UOI*, AIR 1997 DEL 267

⁵⁰ Art. 19(1)(g).

⁵¹ Art. 19(6), See, *Abhilash Textile v. Rajkot Municipal Corporation*, AIR 1988 Guj. 57.

⁵² *Nabipur Gram Panchayat v. State of Gujarat*, AIR 1995 GUJ 52.

⁵³ *Omprakash Bhatt v. State of U.P.*, AIR 1997 ALL 259.

⁵⁴ AIR 1987 G U J 9.

officials by barring their transport from out of the forest area. The alleged motive of the action was to compel the forest dwellers to sell raw bamboo to the local paper mill. The court ordered that the forest department should not interfere in the transit of the bamboo articles from the forests to non-forest areas. In another case,⁵⁵ the Andhra Pradesh High Court struck down a government order that permitted felling of trees and transport of timber from the forest area that was in contravention of law.⁵⁶ The court reasoned that the statutory provisions were intended to safeguard the interests of Scheduled Tribes and to preserve forests. The executive order that violated this law was valid.

Promoting Right to Environmental Information

While the constitution guarantees the fundamental freedom of Speech and Expression,⁵⁷ no such guarantee exists for right to information, Right to access relevant and authentic information is very crucial over environmental issues. It enables one to know and understand about the kind of impact any activity would have on his environment besides forewarning about mishaps, helping in taking precautionary measures and facilitating participation in the processes of environmental planning and decision-making. In the absence of a clear legal articulation of such a right, it was left to the Courts to clearly carve out this right as an integral aspect of the freedom of speech and expression. A catena of case law exists that demonstrates judicial recognition of the right of the citizen to know as flowing from the fundamental freedom of speech and expression and the fundamental right to life and personal liberty.⁵⁸ Following on the recognition of a general right to information, the courts soon began getting into the specifics of the right. In a case that involved rejection of the demands of an environmental action group to access municipal records to examine the legality of certain of the actions of the Pune Cantonment Board, the Bombay High Court held that the right to know was implicit in the right of free speech and expression. As such, disclosures of information as to the functioning of the government should be the norm and secrecy an exception justified only where the strictest requirement of public interest so demanded, it opined.⁵⁹

Thus, one can access governmental information, without any requirement of proving any irregularity. It would suffice if the group were to establish its *bonafides* of action. In another case, between the same parties, the Supreme Court extended this right to all persons residing within the area without limiting it to only interest groups and pressure groups.⁶⁰

Prevention of Abuse

Entertaining petitions in Public Interest and creating a highway for justice by the higher judicial resulted in a phenomenal increase in initiation of judicial process by social action

⁵⁵ *Shankar Reddy v. State of A.P.*, 1992(2) A N D H. L.T. 514

⁵⁶ Ch. III A of the Andhra Pradesh Forest Act, 1967. It prohibited the transfer of any forest or forest produce or the denudation of a forest, without the prior approval of the District Collector.

⁵⁷ Art. 19(1)(a).

⁵⁸ As enshrined in Arts. 19(1)(a) & Art. 21. See, *State of U.P. v. Raj Narain*, AIR 1975 SC 865, See, *S.P. Gupta v. UOI* (Judges' Transfer Case), AIR 1982 SC 149 and See *Reliance Petrochemicals Ltd. v. Proprietors of Indian Express Newspapers Bombay Pvt. Ltd.*, AIR 1989 SC 190.

⁵⁹ *Bombay Environmental Action Group v. Pune Cantonment Board*, Bombay H.C., A.S. Writ Petition No. 2733 of 1986, 7 Oct. 1986, excerpted in Diwan & Rosencranz, *Supra* n. 10 pp. 162-163.

⁶⁰ *Bombay Environmental Action Group v. Pune Cantonment Board*, Supreme Court of India, SLP (Civil) No. 11291 of 1986, 13 Oct. 1986.

groups. While the courts have been more than accommodative in helping people access justice through this avenue, they have not hesitated in taking to task those who attempted to abuse the process. In a case, the Supreme Court found that the petitioner who failed to get the contract from a company for transporting the slurry discharged from the coal washeries, filed a Public Interest Petition claiming the discharge of untreated effluents into the Bokaro river by the company as having caused serious health hazards to the neighbours and sought the court's permission to carry away the slurry. It saw through the game of the petitioner, who intended to harass the company and derive commercial benefit through the action ostensibly in "public interest." The court categorically asserted that personal interest could not be enforced through the writ process and that it could not be used for the purpose of vindication of personal grudges or enmity.⁶¹

In another case, an industry used the arguments of atmospheric pollution, hazardous nature of activity and non-observance of siting guidelines against the neighbouring Solvent Extraction Factory, to pressurise the latter dispose of its plot of land in its favour so that it could expand its own industrial establishment.⁶² The Madhya Pradesh High Court came down heavily upon the petitioner with the remark, "the bogey of pollution should not be allowed to be raised for ulterior selfish motives by disgruntled litigants to hamper or stop the process of industrialization, and dismissed the petition."⁶³

Relaxation of procedures

In addition to the use of PIL to imaginatively interpret the law to make activities responsible for environmental degradation as violative of fundamental rights and promote Environmental rights, the courts have also found this as a convenient vehicle for people, especially of poor and disadvantaged sections, access justice. Through this, one is witness to the amazing ability of the higher judiciary in demystifying the law and its processes, by relaxing procedures, so as to empower the affected, aggrieved and concerned entities, ventilate their points of view in the judicial forum and secure justice when the same was not readily forthcoming from the other aspects of governance. Thus, a concerned citizen, who did not suffer a specific legal injury, was permitted to sue to arrest the damage in public interest and to uphold rule of law.⁶⁴ It has, indeed, been a trail-blazing effort that permitted volunteers to have 'representative standing' and a member of public, empowered, in his own right, to have 'citizen standing', in cases of executive in action or abuse, as a member of citizenry to whom a public duty was owed.⁶⁵ *Doon Valley* litigation,⁶⁶ *Ganga Pollution* cases⁶⁷ and the *Oleum Gas Leak* case,⁶⁸ are the early instances where the environmental concerns got judicial notice and approbation, through this device.

Thus, in the *Doon Valley* litigation, a letter that crudely highlighted the environmental

⁶¹ *Subhash Kumar v. State of Bihar*, AIR 1991 SC 420 at 424. In *Chhetriya Pradushan Mukti Sangharsh Samiti v. State of U.P.*, AIR 1990 SC 2060, the tactic of the petitioner in using the PIL to blackmail people was exposed and the court refused to intervene in the situation.

⁶² *Jayant Vitamins Ltd. v. Rampur Distillery & Chemical Co. Ltd.*, 1992(3) COMP. LA. JR. 1.

⁶³ *Ibid.*, at 13

⁶⁴ *S.P. Gupta v. Union of India* (Judges' Transfer Case), AIR 1982 SC 149, 194.

⁶⁵ For an interesting analysis of relaxation of procedures as to Standing to sue See, Diwan & Rosencranz, at 135-139.

⁶⁶ AIR 1985 SC 652.

⁶⁷ AIR 1988 SC 1037 and 1115.

⁶⁸ AIR 1987 SC 965.

problem and the callousness of the administration in addressing it was elevated to the level of a writ petition. In *Mahesh R. Desai v. UOI*,⁶⁹ a complaint by a journalist of the degradation of the coastal environment owing to unplanned development, promoted the Supreme Court to direct its Legal Aid's Committee to take up the case and issued notices to the concerned governments by invoking its writ jurisdiction. In the *Oleum Gas leak* case, the court allowed the party to bring into its consideration an unconnected cause of action, without the requirement of amendments to the petition. The firm conviction of the apex court, in all these cases, has been that the requirement of sticking to the strict procedures and technicalities of the process, on matters of public interest, that includes environmental concerns, would defeat the ends of justice.

Broad-basing Environmental Administration

Another significant gain of the PIL process, has been the approach of the courts, in looking beyond Governmental institutions and formal structures of administration in managing the environment. In *Indian Council for Enviro-legal Action v. UOI*,⁷⁰ the supreme Court categorically asserted that it was impossible for a single authority, a governmental institution, exclusively and effectively control environmental damage. Environment is best protected by the people themselves and the governmental agencies should seek and secure the assistance of voluntary groups in this regard. The court even suggested more imaginative application of the relevant provisions of the Environment Protection Act, 1986, in broad-basic environmental administration.⁷¹

Evolving New Principles of Good Environmental Governance

Interpretations of the higher judiciary have been of such a nature as would telescope some of the Directive Principles of State Policy into the Fundamental Rights part of the Constitution, to secure constitutional guarantees of protection to the Environment. In addition, the courts are also to be credited with the ability of evolving principles, drawn from a variety of experiences, both within India and elsewhere, that has become the building blocks for good environmental governance, in recent times. The Polluter Pays principle, as laid down in the *Bichhri* case⁷² requires that the polluter bears the costs of cleaning up and compensate the victims of pollution. The precautionary principle, as elaborated in *Vellore Citizens' case*,⁷³ imposes an obligation on every developer, industry and governmental agency to anticipate, prevent and attack the causes for environmental damage and to demonstrate that the activities carried out are environmentally benign. In the landmark judgment in *Kamalnath* case,⁷⁴ the Supreme Court enunciated the *Public Trust Doctrine*. Setting at rest the role of the Government in Environmental management, the court held that the State occupies the position of a trustee of all natural resources. They are, as a

⁶⁹ Wrt. Ptn. No. 989 of 1988.

⁷⁰ 1996(5) SCC 281.

⁷¹ The reference was to two specific provisions under EPA. S. 3 of the Act, empowers the Central Government to constitute one or more authorities to perform such of its functions under S.5 of the Act.

⁷² *Supra* n. 64. See also, *Vellore Citizens' Welfare Forum v. UOI (Vellore Citizens' Case, AIR 1986 SC 275*.

⁷³ *Ibid.* Also See, *A.P. Pollution Control Board v. Prof. M.V. Nayudu*, AIR 1999 SC 2468, 2505 and *S. Jagannath v. UOI (Shrimp Culture Case)* AIR 1997 SC 811, 846.

⁷⁴ *M.C. Mehta v. Kamalnath (Span Motels Case)*, 1997(1) SCC 388, followed in *M.I. Builders v. Radhey Shyam Sahu*, AIR 1999 SC 2468 at 2498.

general rule, meant for public use and enjoyment. The State has the primary obligation of using them for benefiting the public and not to divert it for any private benefit and enjoyment.⁷⁵ *The Sustainable Development Principle*, found expression in the *Ganesh Wood Products Case*⁷⁶ that combined the principle of Inter-Generational Equity, with it as well.

NEGATIVE ASPECTS

There is no denying the fact that PIL has enriched the content of the law, modified the traditional doctrine of *locus standi* and is responsible for devising new procedures for accessing and securing justice. However, the euphoria generated by the positive impacts of PIL has, over a period of time, exposed the drawbacks in the system of justice dispensation and the processes of accessing it, as well. The following are some of the short-comings, that deserve consideration of all concerned about Environmental justice.

PIL as Part of the Problem

The very same factors that justified the public spirited citizens to approach the higher judiciary, have turned out to be the hurdles for justice. Each of the factors like, the relaxation of procedures; doing away with the traditional requirement of *locus standi* and the very characterisation of public interest have become, in a manner of speaking, liabilities for rendering environmental justice. Instances of abuse of the process like, attempting to settle personal grudges or to put undue pressures upon the respondent to do one's bidding,⁷⁷ have not become uncommon. What was considered an inexpensive and expeditious mode of redressal has taken decades to get settled. The *Vehicular Pollution Cases*,⁷⁸ is a classic example of the court being seized of the problem for over a decade and its final resolution is a long way in coming. The case that began its life in 1985 as a petition seeking the intervention of the Supreme Court for closure of hazardous industries and to regulate air pollution caused by automobiles in Delhi, has grown into a case of mammoth proportions and mired in controversies of administrative lethargy in implementation of the court's orders and political defiance bordering on contempt.

Taking advantage of the Superior Court's non-insistence on observation of technicalities, PILs are being filed with little or no preparation. Actions are initiated by filing complaints without proper evidentiary materials to support them. Expectations are that once a petition is filed, the court would do the rest. That, it would activate the administration, approach research bodies to suggest solutions, appoint commissions of enquiry to find facts and, when there are difficulties in the presentation of argument, it would find a counsel to argue for the petitioner or, still better, act as an *amicus* to help render justice! True, the courts have done all this and much more.⁷⁹ But, the heart of the matter is that most of the time, energy and resources of the judiciary is getting diverted for these purposes, so much so that the justice delivery system is under great stress and the cracks in it are becom-

⁷⁵ The principle, evolved in an interesting way. The inspiration was without doubt the *MonoLake case* (*National Audibon Society v. Superior Court of Alpine Country*, 33 Cal 3d 419), in which the Californian Supreme Court made use of the doctrine. While, it was a gradual process of evolution of the principle in U.S., the rule found expression, all of a sudden, in the Indian case.

⁷⁶ *State of Himachal Pradesh v. Ganesh Wood Products*, AIR 1996 SC 149, 159, 163.

⁷⁷ See, *Supra*, n 61, n 62, and n.63.

⁷⁸ *M.C. Mehta v. UOI*, Wrt. Ptn. (Civil) No. 13029 of 1985.

⁷⁹ See *Diwan & Rosencranz, Supra* n. 10, pp. 141-145.

ing visible. The highest court, has shown its annoyance at taking every conceivable public interest issue to its door-step when compliance with the orders made at the local level, in most of the cases, would have prevented the docket explosion at the highest level. As early as in 1980, in the *Ratlam Municipal Council* case,⁸⁰ the Supreme Court upholding the orders of the Sub-Divisional Magistrate, expressed thus in unmistakable terms. Had the Municipal Council, the Court stated, spent half its litigative zeal of rushing from lowest to the highest court, in cleaning up the streets and complied with the orders issued at the local level, the civic problems would have been solved a long time back.

Individualistic Character

PILs as a general rule, are fought in public interest and decided for protecting the interests of a large number of people. But, there are certain alarming and emerging trends. One of the most significant ones has been that of the tool becoming personalized, individualistic and attention-seeking. There are instances of their identification with the personality of a judge or a litigant.⁸¹ It becomes a gamble when the outcome of the case depends on the judge before whom it gets posted.⁸² No doubt, the personality of the judge and the litigant, and their deep commitment to social justice and protection of the environment contributed, in a major way, to the evolution of the jurisprudence on the subject. But, without such a concern and commitment spreading and percolating to the different layers of justice-delivery, administrative arrangement and legal policies, in any significant way, it exposes the system to the dangers of facing a vacuum (in their absence) and becoming influenced by different whims and fancies that may pull governance in every possible direction. As a matter of fact, owing to this factor, Environmental legal advocacy, in India is getting exposed to this situation.

Scope for Arbitrariness and Inconsistency

Another danger of the phenomenon is the scope for arbitrariness and inconsistency in the entire process. Once the PIL process gets identified with certain judges and practitioners of law and the kind of impact their approach would have on the course of justice, it becomes very difficult to expect consistency and uniformity, both in approach and final outcome in similar cases argued and adjudicated in all other similar cases. The *Narmada Judgment*,⁸³ perhaps, presents a study in contrast, especially for the approaches adopted and the conclusions drawn for the majority (of two) and by the minority (dissent of one) in the Supreme Court. The judges dealt with the same fact situation and profusely referred to

⁸⁰ *Municipal Council, Ratlam v. Vardhichand*, AIR 1980 SC 1622.

⁸¹ See, Diwan "Cleaning the Ganga", EPW, 1 July 1995, 1551, in which the activist role played by Justice Kuldip Singh & M.C.Mehta in Ganga Pollution and other cases finds mention.

⁸² Relaxation of procedures to enable the indigent impoverished and underprivileged ones access the portals of justice is considered to be the lasting contribution to the judicial process by the Judges like Krishna Iyer & Bhagwati. Both the judges, having served on the National Committee on Juridicare that in its final report expressly recommended for widening the rule of *locus standi* to facilitate PIL (*Report on National Juridicare : Equal Justice - Social Justice*, 61(1977), Govt. of India, Ministry of Law, Justice & Company Affairs), began implementing their own recommendations in their judgments, that liberalized standing, fostered legal service institutions for the weak and disadvantaged sections of society.

⁸³ *Narmada Bachao Andolan v. UOI*, Wrt. Ptn. (c) NO. 319 of 1994, 18 Oct. 2000. A three member Bench comprising of Chief Justice A.S. Anand and Justices S.P. Bharucha and B.N. Kirpal, decided the case. The dissenting opinion was given by Justice Bharucha.

the very same grounds. But, in the end, opinions differed between the majority and the minority. While the former approved of the execution of the proposed developmental project “for greater common good,” the dissenting opinion desired a thorough review of the entire decision-making process.

The Supreme Court, in a stunning judgment ordered shutting down of a number of hazardous industries in Delhi and relocate them beyond the capital city.⁸⁴ The sweeping closure orders appears to have improved the air quality and reduced risks to public health and safety in those parts of Delhi. But, the impact on the work force, was nothing short of being traumatic. The court order was used as an excuse by some of the managements to close their ailing establishments⁸⁵ and to postpone payment of compensation under some technicality or another, till clarification by the Supreme Court, two years hence, upon an application from the aggrieved workmen.⁸⁶ In a later case,⁸⁷ the apex court further clarified as to the obligation of the corporate entity to take all such precautionary measures as are required to ensure their activities did not cause harm or alarm in their establishments to such places where the residential areas could be kept wide apart from their location. It is interesting to observe the earlier version of the same case, in the Bombay High Court⁸⁸ produced a different kind of reasoning, diametrically opposite to the one adopted by the Supreme Court. There, the High Court rejected the contention of the petitioner to relocate the hazardous industry. The reasoning included, the need for locating an industry in close proximity of the area where the infrastructural facilities are available, that the dislocation would render thousands of workers jobless and make them suffer the trauma of displacement and that the situation demanded getting satisfied with taking appropriate safety measures in and around the place they are located.

Problems Resulting from Reliance on Expert Opinion

In dealing with the complexities of environmental issues, the higher judiciary has taken the initiative of seeking and obtaining expert advice to help them arrive at a decision. But there are instances when the opinions so obtained are either based on erroneous assumptions or insufficiency of data. In either case, the damage resulting from the decisions based on shaky scientific foundations may prove irreversible. The *Taj Trapizium* case,⁸⁹ may be cited to illustrate this point. In that case, in order to save the famed Taj Mahal from pollution and degradation the Supreme Court, relying upon the report of NEERI, ordered closure and relocation of several small-scale units, especially the foundries in the area. The Report, unfortunately was not based on all relevant facts and its methods, analysis and conclusions left a lot to be desired from a reputed scientific and research organization. While the implementation of pollution-control measures ordered by the court is proceeding at a tardy pace, the small scale sector which bare the brunt of the judgment is still to recover from its impact.⁹⁰

⁸⁴ *M.C. Mehta v. UOI*, AIR 1996 SC 2231.

⁸⁵ See, N. Dasgupta, “Tall Blunders,” *Down to Earth*, 30 Sept. 1998, p. 22.

⁸⁶ *M.C. Mehta v. Union of India*, 1999(2) SCC 91.

⁸⁷ *F. B. Taraporawala v. Bayer India Ltd.*, AIR 1997 SC 1846.

⁸⁸ *Bayer (India) Ltd. v. State of Maharashtra* 1994(4) BOM.C. REP. 309, 353.

⁸⁹ *M.C. Mehta v. UOI*, AIR 1997 SC 734.

⁹⁰ See, Raghuram, “The Trouble with the Trapizium,” *Down to Earth*, 15 Apr. 1996, p. 32 and the Report of the Tripathi Committee set up by the Uttar Pradesh Government in 1994 to study the impact of the pollution on the Monument, cited in the same article.

The *Vehicular Pollution Cases*⁹¹ presents another interesting, if not perplexing situation. While the Court ordered for conversion of vehicles to operate on Compressed Natural Gas (CNG),⁹² based on the expert opinion made available to it, the Tata Energy Research Institute (TERI) subsequently came up with the idea that Ultra-Low Sulphur Diesel (ULSD) could be a better option. As things stand now, the Delhi Administration has not, as yet been able to fully implement the orders of the apex court.

Non-exhaustion and Neglect of Other Remedies

Remedy for public suffering has been sought, with great degree of regularity by approaching the higher judiciary by taking recourse to the writ remedy. Non-technical nature of procedure, expeditiousness, economy, limited requirement of adducing detailed evidence and reduction of the likelihood of prolonged litigation in appeals by directly approaching the highest court, have all contributed to this astounding phenomenon in India. But, the downside of it has been the blunting of other available tools of justice which, perhaps, are more appropriate and effective than the PIL route could achieve, at times.

It must be realized that the relief through PIL is general, prospective and, as a general rule, without compensation. On the other hand, in individual and private actions remedial orders are case-specific in nature and conclude with tangible and concrete results with clear directions for actual implementation. The Civil Procedure Code (CPC), provides scope for *Class Action Suits* or *Representative Suits* in which a number of people, having similar interests can bring action at the lower court level.⁹³ Such lawsuits enable clustering of issues and presentation of petitions and responses on behalf of a number of persons having the same interest. No separate lawsuit for each one would be required and the litigation cost could be shared by all the members of the group. Scope for adducing detailed evidence, through this process, lessens the strain on the Judges, which a writ process invariably imposes. This device can be employed in instances where mass torts occur, as attempted by Government of India on behalf of the victims of Bhopal Gas Disaster.⁹⁴ This was also initially employed in the *Ganga Pollution (Tanneries) Case*,⁹⁵ in proceeding against a number of polluters. Remedies available under specific environmental legislations, the common law and criminal law remedies are the other alternative avenues for justice delivery that could be prompt and effective. PIL process has been so abused that these options are scarcely put to use by all the concerned.

There is another danger of directly approaching the highest court. Since, in such cases, the outcome of the case is entirely dependent on the whims and fancies of the particular judge, should an adverse opinion be given by the court, it would mean the end of the road for the seeker of justice, as there is no one to receive further appeal. It would bring to an abrupt end the quest for justice without its realization.⁹⁶

⁹¹ See, *Supra*, n. 72

⁹² Order dt. 26 Apr. 1996 (4) SCALE 7 (SP)

⁹³ Order 1 Rule 8, CPC 1908

⁹⁴ As provided under Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985

⁹⁵ AIR 1980 SC 1037, 1038

⁹⁶ Once a writ petition is rejected on its merits by the Supreme Court or a High Court, no subsequent writ petition can be moved in the same court on the same course of action. It also precludes a petition to Supreme Court for alleged violation of a fundamental right, if the High court had dismissed the petition earlier on merits. See, *Daryao v. State of U.P.*, AIR 1961 SC 1457, 1465, 1466

Limits of PIL and the formal legal process

PIL is not always a smooth path to tread. Limits exist to the extent to which the law, its processes and the machinery of enforcement, even when it is positively inclined, can enforce duties, protect rights and secure redressal. This indeed, is the limiting factor of law itself. Habits, attitudes, patterns of behaviour and the like do not get altered over night, even when the highest authority demands. PIL is more of a fire fighting mechanism. It cannot be expected to bring attitudinal change every time it is employed. Executive decisions do find a method of circumventing court orders, as to ensure that the ground realities do not get altered. Corporate entities have, time and again, demonstrated that they are adepts in taking advantage of situations, even when decisions apparently unfavourable to them are made. This is very well illustrated in the follow-up on the decision of the Supreme Court ordering relocation of hazardous industries.⁹⁷ It required another order of court,⁹⁸ that too two years hence, to redress the mischief of non-payment of compensation to the workers by the employers upon closure of the industries. It is true that the courts have devised the technique of continuing mandamus to appraise themselves of satisfactory compliance of their directions from time to time. But, it must be understood that this is intended to make the administrators and the addressees of the orders realise that their actions are being constantly monitored judicially.

The courts have not, as yet, evolved a mechanism for ensuring compliance with their directions both in letter and spirit, for all times to come. They do not have the tool that would assess the quality, content and level of compliance of their orders. Moreover, their time is so stressed that they cannot even think of monitoring, on an individual basis, whether the instructions are indeed observed.

Even the practitioners of law, who take up public interest issues, *pro bono* (without charging a fee) are hard to come by. The work is enormous. It is back-breaking as, they are required to start from scratch without a ready-made case brought before them to argue.⁹⁹ Environmental legal advocacy requires a very high level of understanding of this emerging area of law and not many are there in India in taking up the challenge and successfully argue the cases before the higher judiciary.

Further “public interest” is not something that is homogenous and common, in the Indian context. There may exist divergent interests even among the claimants like, for example, among the people threatened with displacement for the execution of a development project, some of them may be satisfied with monetary compensation, some with alternative employment and others desiring to stay put and fight till they are totally rehabilitated.¹⁰⁰

Some of the principles enunciated by the Supreme Court are either vaguely formulated, a little confusing or not capable of implementation in its totality. The “Absolute Liability” principle formulated in the *Shriram* case¹⁰¹ referred to liability without fault upon the occupier of the premises for industrial accidents, escape or discharge of toxic substances.

⁹⁷ *Supra*, n. 78.

⁹⁸ *Supra*, n. 79 and n. 80.

⁹⁹ See Public Interest Litigation, Anuradha Rao, Public Affairs, Centre, Bangalore (1999), p. 23.

¹⁰⁰ *Ibid*.

¹⁰¹ *M.C. Mehta v. Union of India (Shriram Gasleak Case)*, AZIR 1987 SC 965.

The principle was sought to be applied in the *Vellore Citizens' case*,¹⁰² which did not involve any of the situations for which it was first applied. The latter case, rolled together the polluter pays principle' (applicable to non-toxic pollution cases) with the absolute liability standard (applicable to toxic torts).¹⁰³ In the *Bichhri case*,¹⁰⁴ the "polluter pays principle" extended the absolute liability for harm to the environment not only for compensating the victims of pollution but also the cost of restoring the environmental damage. The legal logic, apparently, has been stretched too far as to make it very difficult to implement.

Neither the legislature, nor the executive has taken kindly to this "judicial take over" of their functions. This assumption of "creeping jurisdiction,"¹⁰⁵ has not found favour with many of the judges themselves. In *Asif Hameed v. State of Jammu & Kashmir*,¹⁰⁶ the Supreme Court asserted that the constitution does not permit the court to direct or advise the executive in matters of policy or to sermonize on matters that lie within the spheres of activities of the legislature or executive. In the *Calcutta Taj Hotel Case*,¹⁰⁷ Justice Khalid advocated judicial restraint in PIL, so that the salutary type of litigation did not lose its credibility.

NEED FOR FRESH INITIATIVES

It is a humbling feeling that PIL, that started its life in India, to straighten and tighten the system of governance has, over a period of time, owing to some of its inherent weaknesses, not retained many of its therapeutic and curative qualities. PIL, as the highway for judicial justice, is experiencing a lot of wear and tear exposing many a pot-holes all along the way. Besides redefinition of its goals and relaying of the lanes that lead to them, a number of alternatives has to be evolved to supplement and strengthen the principal mechanism of environmental justice delivery.

The aberrations leading and resulting from environment justice delivery by Courts of law, require a fresh look at the system of environmental management in India. It has become a common occurrence for State administration and the Voluntary groups to take turns to question the competence of the judiciary, each time its verdict did not meet either of their requirements. Taking the cue, the lawmakers, law enforcers and voluntary groups are constantly endeavouring to device mechanisms to rein in the courts of law. The judiciary on the other hand appears to have done everything to add fuel to fire. It is time for a constructively critical evaluation of the environmental justice delivery breaks fresh ground for better environmental governance in India.¹⁰⁸

¹⁰² *Vellore Citizens' Welfare Forum v. UOI*, AIR 1996 SC 2715.

¹⁰³ See, Diwan & Rosencranz, *Supra*, n. 10, P. 111.

¹⁰⁴ *Indian Council for Enviro-Legal Action Litigation v. UOI*, AIR 1996 SC 1446.

¹⁰⁵ U. Baxi "Taking Suffering Seriously : Social Action Litigation in the Supreme Court of India," 29 *The Review* (International Commission of Jurists), Dec. 1982, 37.

¹⁰⁶ AIR 1989 SC 1899.

¹⁰⁷ *Sachidananda Pandey v. State of West Bengal*, AIR 1987 SC 1109.

¹⁰⁸ This would form the base for analysis in the third and final of the series of articles on the subject. The article is proposed to be carried in the next issue of the journal.

ENVIRONMENTAL JUSTICE DELIVERY IN INDIA: IN CONTEXT

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TABLE OF CONTENTS

THE SETTING	1
LAW & POLICY-MAKING PROCESSES	2
THE IDEAL.....	2
THE REAL PICTURE	2
LAW ENFORCEMENT	7
UNTRAINED AND UNSKILLED.....	7
JURISDICTIONAL QUESTIONS.....	9
ENVIRONMENT MANAGEMENT SERVICE.....	10
BUDGETARY, INFRA-STRUCTURAL AND ORGANIZATIONAL PROBLEMS.....	11
POLITICIZED, BUREAUCRATIZED AND LACKING IN ADMINISTRATIVE WILL.....	11
CENTRALIZED AND NON-PARTICIPATORY	14
POOR PLANNING, POOR MAINTENANCE OF RECORDS AND POOR VIGILANCE	15
EXTREMITIES IN THE POLICIES OF SENTENCING.....	16

The Setting

We are witness to the occurrence of a new phenomenon. The phenomenon of the emergence of Courts of Law in India, perhaps, as the sole dispenser of environmental justice. By delivering landmark judgments, that have, indeed, altered the common man's perception of the court of law as just a forum for dispute resolution and nothing else, the Indian judiciary has carved out a niche for itself as a unique institution. This has been especially so over issues concerning protection of human rights and environment. International legal experts have been unequivocal in terming the Indian Courts of law as trail-blazers, both in terms of laying down new principles of law and in the introduction of innovations in the justice delivery system.¹ The increasing interest in and a sense of inevitability in approaching the corridors of justice, over every conceivable environmental problem by public interest groups and individuals, bear witness to this unprecedented occurrence. After riding the crest wave of unusual and unprecedented popularity and global attention, for about two decades, the superior judiciary in India, of late, is also getting targeted as an institution that has become complacent and getting more insensitive to constructive criticism.² This requires scrutiny. A detailed analysis of the entire phenomenon would be perfectly in order, in getting an idea of the entire picture. As a first step in that direction, it may be appropriate to focus on those aspects of the phenomenon that were responsible for putting the courts on a pedestal, while the

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¹ See Anderson Michael R., "Individual Rights to Environmental Protection in India", in Alan E. Boyle & Michael R. Anderson (eds.), *Human Rights Approaches to Environmental Protection*, Clarendon Press, Oxford (1998).

² Prashant Bhushan, "Judges in their own cause - I & II", *The Hindu*, 4-5, 9, 2001

other two wings of the government, the legislature and the Executive slipped in public esteem. The enquiry in this paper is to contextualize the role of the justice delivery system in India in environmental governance. More specifically, this is to examine the rationale for the occurrence of the phenomenon of looking up to the judiciary as the only reliable bastion of and the final hope for the common man in securing environmental justice.

Law & Policy-making processes

The Ideal

If one goes by popular perceptions and natural expectations, every law ought to have its roots in, a felt need. The inadequacy or vacuum in the existing system, in meeting the challenges posed by a problem situation, leads to the need to evolve newer laws and more effective tools of implementation. Legal solutions may either emerge out of a process of consultation and consensus building among the affected community or, it may also result from the government taking cognizance of an existing customary practice and strengthen it by investing it with the force of law. The local customs, traditions, practices and solutions may lead to the evolution of a broad policy frame, spelling the local, regional and national principles of governance. Fashioning a body of law and a set of rules to operationalize the policy and mechanisms of implementation are the next logical steps in the system of governance. Thus, the policy, the law, the institution of implementation, the plan and programme of action and actual implementation in a sequence, in that order, complete the picture of the system of governance, in an ideal situation. Conforming to the Constitutional frame and keeping pace with its evolution, in the scheme of things, would ensure legal legitimacy and constitutional validity to the policy, law and administration.

The Real Picture

1. Lack of vision, in foreseeing environmental problems, not evolving appropriate policies, plans and programmes, besides non-dynamic, reactive (rather than being, proactive), legislative laws, in tackling the complex and ever challenging environmental issues and problems appear to be at the root of the activist stance of the courts of law.³ The following propositions and illustrative examples, present the actual state of affairs that is far removed from the ideal condition, stated above.

2. The entire process of evolving policy and law, in the country is a flawed one. It is both an illogical and absurd process. We have policies without laws, laws without policies and policies following legislative efforts!

(i) The National Agricultural Policy and those of the States, is a classic example of a policy without law. No single legislation encapsulates the contents and concerns of the policy document. This has to be gleaned from a variety of bits and pieces of legislations.⁴

³ See generally, *Evaluation of Environmental Laws and Proposals for Reforms - A Report*, prepared by the Centre for Environmental Law Education, Research, and Advocacy Research Team (M.K. Ramesh, K. Lenin Babu, B. Deepa and Anand Mohan Bhattarai), National Law School of India University, Bangalore, for the Indira Gandhi Institute of Development Research, Mumbai (1998).

⁴ Like those dealing with Agrarian Reforms : Land reforms ; land ceiling etc., ; and those that concern Bonded Labour, Debt Relief, Fertilizers, Insecticides, Pesticides, Seeds, Land Revenue, etc.

Agricultural processes, production, marketing, support price and the like, have not attracted the attention of the lawmaker as yet.⁵

(ii) Quite a few environmental legislations do not having the backing of a policy document. The wildlife (Protection) Act, 1972, The Forest (Conservation) Act, 1980; Water (Prevention and Control of Pollution) Act, 1974; The Water (Cess) Act, 1977 and Air (Prevention and Control of Pollution) Act, 1981, are only a few examples of such “stand alone” documents.⁶

(iii) We have the classic case of putting the cart before the horse, with the framework Environment (Protection) Act, 1986, preceding the National Policy and Strategy for Environmental Protection and Sustainable Development. The latter following the former by a gap of 6 years!

3. Environmental Law-making in India has not followed any consistent and logical path of serious deliberation, both at the stage of drafting and consideration on the floor of legislatures, before becoming the law of the land. Even chance remarks or an expression of displeasure over an undesirable environmental situation, by charismatic political leaders have, often, led to the making of laws! The circulars and guidelines as to Joint Forest Management⁷ and the Notification as to Coastal Regulation Zone,⁸ apparently, are illustrations of this.

4. “Inspirations” from the experiences in the West, have at times contributed to environmental legislations in India. The Water (Prevention & Control of Pollution) Act, 1974, is illustrative of this “inspired” effort. A Scottish law enacted in early 1950's was the source (without any acknowledgement, of course!) for the Indian effort. But the most astonishing, if not perplexing, aspect of this development is that the Scots repealed their law in 1973 and enacted a new law. The Indian lawmakers resurrected parts of it, from the ash cans of history and clothed it with Indian tri-colour in 1974!

⁵ On August 9, 2001, the Lok Sabha passed the Protection of Plant Varieties and Farmers' Rights Bill. The Bill's ability to protect the interests of the farming community, is still being debated. See “Who is protected?”, *Down to Earth*, Vol. 10, No. 8, September 15, 2001, pp. 48-51, in which the opinions of M.S. Swaminathan, Ashish Kothari, Suman Sahai and Rajeev Dhawan are incorporated.

⁶ The National Policy document concerning Pollution, unveiled in 1992, stands in independent, isolated splendor from the 1974 and 1981 Legislative efforts in combating Water & Air Pollution. The Biodiversity Act, 2000, tabled before the Parliament in May 2000 and under its “active” consideration, is one more of such recent efforts of our Lawmakers, the policy backing for which has to be discerned from the legal document itself!

⁷ The Circular & Guidelines concerning Joint Forest Management, No. 6-21/89-P.P, Govt. of India, Ministry of Environment & Forests, dated June 1, 1990, issued to all the States, followed a declaration on the floor of the Parliament, made by Maneka Gandhi, as the Minister of State for Environment & Forests, of the Government's commitment and resolve to involve communities of people in the management of forests. The legal pundits in the respective governments, in giving effect to the legislative commitment and the guidelines issued to them, had to stretch their imagination and skill in locating the basis in the 1988 Forest Policy document and a seemingly innocuous looking provision concerning management of village forests under the Indian Forest Act, 1927.

⁸ When Mrs. Indira Gandhi, as the Prime Minister of India, found that the vast coastline of India had become a garbage bin and subject to unplanned development, letters were shot off from her office to the Chief Secretaries of Coastal States to take extra care of their coastline. A letter, which did not have any legal basis became the “Lakshmana-Rekha”, in the management of their respective coastal eco-systems. A formal legal frame in the form of Coastal Regulation Zone Notification took shape, a decade hence (February 20, 1991).

5. Subscription to international legal arrangements and commitment to implement them through ratification, without the necessary national preparation for the same in putting across the Indian points of view, in international fora, have led to making of laws to fulfill our international obligations. The Biodiversity Bill, tabled before the Parliament in May 2000, is one such example. The Indian legislative efforts, that were at a formative stage during and at the time of the ratification of the international Convention, went through several drafting efforts, to tailor Indian response to the international commitment. Even in its current form, the Bill has not addressed many of the local and national concerns.⁹

6. The need to conform to the conditionalities of international financial institutions at times, activates the powers that be to go through the process of law making or effect amendments to the existing ones. The Draft Rules on management of Bio-medical Wastes, in 1995 and 1997¹⁰ and the proposed Wildlife Protection (Amendment) Bill, 1997,¹¹ are illustrations of this proposition, the formulation of draft national policy on rehabilitation of project displaced people and enactment of legislations by a number of States, in this regard,¹² are also on account of the need to conform to the conditionality of the World Bank that the impoverishment risks of people displaced by Bank funded developmental projects should be minimized.¹³

7. The current corpus of Environmental Law in India suffer from a multiple disability. It is myopic in vision, sectoral in approach and a knee jerk reaction to environmental problems. The Environment (Protection) Act, 1986, for instance, designed as an overarching umbrella legislation, to deal with every conceivable aspect of environment has, by and large remained a law regulating problems of pollution. Coming, as it did, in the wake of the mass disaster at Bhopal, the expectation essentially has been that this legal tool would help prevent and avoid such a calamity from recurring. No evidence exists, both in its substantive part and in actual application, in about a decade and half of its working, that this law possesses the potentiality of meeting the challenges of mass environmental disasters.¹⁴ The ever-increasing number of rules and notifications under it,

⁹ For a critique of the Bill, See M.K. Ramesh, "Draft Biodiversity Bill : Sans Eyes, Sans Teeth - A Mere Cadaver!" 1 *IJEL* 1(2000), p.82.

¹⁰ The Drafts included the idea of incinerators as the device to eliminate waste. The World Bank "induced" effort, met with serious opposition from a number of organizations whose research findings brought to light the adverse impacts of exclusive reliance on incinerators. The Central Government was compelled to revise the drafts and evolve a more acceptable law, a year hence: The Biomedical Waste (Management & Handling) Rules, 1998.

¹¹ The launch of Eco-Development Project, supported by the Global Environment Facility and funded by the World Bank required changes in the existing Wildlife Law to ensure that there was no involuntary displacement in the process of developing National Parks. The 1997 Bill, was the formula worked out to facilitate this. The Bill remains an intended piece of legislation, to this day.

¹² For a detailed critical analysis of Policy and Law on the subject, see *Rehabilitation Policy and Law in India : A Right to Livelihood*, Walter Fernandes, Vijay Paranjpye (eds.), Indian Social Institute, New Delhi (1997).

¹³ Operational Directive (O.D. 4.30) June 1990 : Involuntary Resettlement.

¹⁴ A number of Rules and Notifications under the Environment (Protection) Act, 1986, dealing with Chemicals, toxic, hazardous substances, wastes and organisms appear to tackle this problem. Provisions exist for defining 'major accidents', planning and responding to them and for formation of 'crisis groups'. Very little information is available in the public domain of bringing into operation, these aspects of administrative preparedness. Even the Public Liability Insurance Act, 1991, that absorbed the principles laid down in the *Oleum Gas Leak Case (M.C. Mehta v. Union of India, AIR 1987 SC 965)*, that fixed

while giving the impression of broad-basing the ambit of the Act are, in fact, after thoughts to the legislative design rather than its integral part.

Piece-meal approach to environmental problems, predominate legislative effort. While we have legislations to control water and air pollution, atmospheric pollution gets less than peripheral consideration. Forests and wildlife get separate and independent treatment. A separate legislation on Geographical appellation of goods (including varieties of life forms) has recently been passed. Laws enumerating the rights of farmers and breeders are in the pipeline and the Bio-diversity Bill is awaiting parliamentary nod.¹⁵ None of these efforts have a holistic vision of environment and its management, nor would they endeavour to bring about coordination among various implementation agencies. Little realization exists that each of these legislative efforts are inter-related and that there is need for consultation and coordination among a number of ministries and implementation agencies to work together in finding legal solutions to the environmental problems in a concerted way.

Micro-planning, as a criterion to justify different standards for implementation of the law, is not something found natural or logical in the administrative process. Issuance of consent orders, without deeming it necessary to formulate and follow certain criteria for such a judgment, by the Pollution Control Boards, are not in common. Courts of law have been approached, seeking directions to be issued to the agencies of state to formulate zoning policies, to justify their action.¹⁶

8. Policy and law-making is not always an open and transparent process. There is no culture of consultation and initiation of efforts in seeking opinions, critiques and comments to an intended piece legislation. Let alone the people who are most likely to be affected by the legislative effort, even the other sister departments in the government and line agencies would not normally have access to the “secret”, “confidential” and “cabinet” notes, till they get presented on the floor of the legislature. While the Biodiversity Bill of 2000, went through over half a dozen drafting efforts, spread over seven long years, most of the forests and wildlife departments in a large number of States, remained oblivious to what was happening around them.¹⁷

Further more, as a matter of fact, the design and draft of policies and legislations evolve out of the bureaucratic stables, with the lawmakers having very little significant role to play in the entire process. Several bills are presented and rushed through the legislatures with the members devoting very little of their quality - time to deliberate, debate and decide on their contents and impacts. As if this is not enough, several ordinances get issued when the Parliament is not in session, to circumvent legislative scrutiny.

liability on the occupier of an industrial unit for injuries occasioned to a third part, did very little to deal with the prevention, precaution and avoidance of mishaps in industrial establishments.

¹⁵ The Ministry of Human Resources Development is busy finalizing a draft bill on Traditional Knowledge Systems, that would cover the knowledge associated with Biodiversity Conservation and Management.

¹⁶ In the case of *Obayya Poojari v. Karnataka State Pollution Control Board*, AIR 1999 Kar. 15, the concerned State Pollution Control Board, issued the consent order for stone crushing, without formulating a suitable zoning policy for stone quarrying and crushing in the State. On being approached, the Karnataka High Court directed the government to evolve a policy to regulate the business.

¹⁷ A panel discussion organized to deliberate on the “Draft Biodiversity Bill”, as part of training the functionaries of the State (Forest & Wildlife Authorities) under the Environmental Law Capacity-Building Project of Government of India, organized by National Law School of India University, Bangalore (January 12-17, 2000), with over 20 high functionaries of different Forest & Wildlife departments of State Governments participating in it, bear witness to this.

Although, such a device would only be in operation for a short while, its impact lasts for a longer period. What remains a matter of concern is that many of these administrative actions exceed their brief of detailing mere administrative procedures, as they deal with substantive aspects of law, too. A fairly recent device employed by the administration is to circulate a note, in an informal way, among groups of people and when it generates much heat and resistance, append it the law as an aspect of its implementation. Should it evoke any adverse reaction, it would become convenient to disown it as being “nothing official about it”!¹⁸

9. The evolution of environmental policy and law in India is on a parallel track to that of Constitutional evolution. They neither reflect the constitutional aspirations nor appear to conform to its commands. While the Constitution of India has been in dynamic ferment, keeping pace with the needs of changing times, in the fifty years since its inauguration, the whole body of environmental legislations is in a state of ferment displaying least dynamism. The Constitutional commands as to participatory environmental management in a spirit of cooperation and partnership¹⁹ between the State and the Citizens and vesting the local communities and the local government with the function of managing the local resources by ushering in a process of democratic decentralization of governance,²⁰ have neither informed nor influenced the environmental legislative processes, in bringing a paradigmatic shift from the centralizing tendencies.²¹

Antiquated laws continue to rule the roost. Legal foundations of every aspect of natural resource management, are to be found in the efforts of our colonial masters. Some of them are so outdated that they are directly in conflict with the current environmental legal regime. The Indian Easements Act, enacted in 1872, for instance, has a provision by which one acquires the right to pollute the neighbour’s property!²² The objectionable provision is yet to come within the scrutiny of the legislature for the purpose of amendment. The Land Acquisition Act of 1894, which empowered the State to acquire private property for a public purpose, got amended after ninety years, to further strengthen the state to resort to such procurement even for a company (i.e., for a private purpose, too!). The Indian Forest Act, of Colonial Vintage (enacted in 1927), remains in the same shape and form, after over a half-century of our independence, while the forest cover in the country has recorded a sharp decline, during the period.²³ Industry-related

¹⁸ A note, that originated from the Central Government on CRZ Notification, is now in circulation. It does not bear the characteristic of a “Cabinet note” or “Secret document”. The note, if operationalized, relaxes some of the stringent regulations of the Notification. A number of Social Action groups have begun deliberating upon it and sending their reactions to the government. Scope exists for the government for not proceeding any further with this “non-official” document!

¹⁹ Through the 42nd Amendment to the Constitution, whereby Art. 48A (Obligations of the State) and Art. 51A (g) (Obligations and fundamental duties of citizens) were inserted.

²⁰ 73rd and 74th Amendments to the Constitution, have created the third tier of governance in the form of Local Self Governments (Panchayats, Municipalities and Municipal Corporations). Read along with the 10th and 11th Schedules, the local resource management gets vested in local government.

²¹ A recent codifying and consolidating effort commissioned by the Central Government, drafted by B. Ramaiyya, Former Law Secretary, Government of India, in circulation, while seeking to refine the Environment (Protection) Act, 1986, has further centralized administrative functions, so much so that even the State Pollution Control Boards have their powers curtailed under the new law in the making.

²² S. 28(d) of Indian Easements Act, 1882.

²³ The enactment of the Forest (Conservation) Act, 1980, appears to have addressed the issue of forest degradation by taking away the power of the State Governments in deciding about use of forests for non-

laws and the laws concerning Mines and Minerals, were all enacted, within a decade of our independence. Except for minor cosmetic changes, here and there, these continue to operate with little or no accommodation of current environmental concerns.²⁴ These are only a few illustrations. But, these do indicate the fact that, while the laws enacted earlier, perhaps, served the purposes of the time when they were made, have failed to demonstrate the dynamism required to address the challenges to environment in the current context.

Law Enforcement

Environmental law enforcement, being a highly specialized area of implementation, entrusted to different agencies under different laws, presents a none-too-happy-a-picture. Lack or inadequacy of skill; less than satisfactory infrastructural facilities ; poor and unimaginative understanding of the law ; jurisdictional conflicts and lack of coordination, among different agencies of implementation, appear to contribute to poor and in effective implementation of the laws. Ability of some of the more resourceful industries in either camouflaging their violations and non-compliance and in exerting undue pressure on the enforcement agencies, also has contributed to the inefficiency of the enforcement apparatus.²⁵

Untrained and Unskilled

The environmental law enforcement agencies present a very disturbing picture. Trained and skilled personnel in law are in short supply. The Ministry of Environment and Forests, upon coming into existence two decades back, had a Legal Cell, with a Law Officer. The Cell does not exist any longer.²⁶ The policy papers and legislative drafts are prepared either by non-law persons within the Ministry or by commissioning the services of experts from outside the Government. Although, the drafts get whetted by the Law and Justice Department, before getting tabled before the Parliament, it is done routinely like any other legal draft without bestowing any particular attention as the subject may demand. The Legal Department would rather pay greater attention to the form, structure and the technical aspects of the draft rather than to its substance. The Ministry at the Centre and at its regional offices is served by scientific officers and social scientists and presided over by senior bureaucrats drawn from the Central Civil Service, few of whom are trained in Law, much less in Environmental Laws. Another phenomenon, that is getting increasingly pronounced in the Environmental aspect of the administration is that the authorities at the policy-making level do not remain in the same position for long, as to understand the nature of work and acquire an in-depth knowledge over its functioning.

forest purposes and vesting the same with the Central Government. But, this has only resulted in Centralization of power rather than effecting qualitative change in terms of ensuring conservation.

²⁴ Rules have been appended to these legislations, ostensibly for the purpose of taking care of environmental concerns, in late 1980's, but, it is uncertain whether they do really impact the decision making process as to mineral extraction.

²⁵ This appears to be common in advanced countries as well. **See** Colin Stevenson : "A New Perspective on Environmental Rights after the (Canadian) Charter", 21 *Osgoode Hall Law Journal* 290, 396 (1983)

²⁶ In the submission made to the National Expert Committee, guiding the execution of the project on Building Environmental Law Capacity a proposal for the revival of the Legal Cell, was made, around three years back. The proposal is yet to come to fruition.

Instances abound of the personnel in the higher echelons of the ladder of administration getting training (including a couple of stints abroad) in the environmental management systems and then moving over to the other departments. Very little scope exists for putting into practice, whatever expertise acquired by the authority by such training. Nor, has there been a proper mechanism evolved to assess and account for such expensive investments.²⁷

While the Central Pollution Control Board (CPCB), at the Centre, is well served by a team of Law Officers, their rôle is confined to assisting and briefing the Private Legal Counsels, appointed for the purpose, after the dispute involving the government comes up before the Courts of Law. No system is evolved, as yet, to facilitate consultation, by the different branches within the Board, with the legal wing, before or at the time of decision-making by each one of them. No special care is taken in ensuring that the legal personnel recruited do possess the knowledge and skill required for understanding and interpretation of environmental laws. No regular, periodic, verifiable training programme is evolved to ensure that their capacity in Environmental Laws is enhanced, by the Board.²⁸

The story is no different in the regional offices of CPCB or in the State Boards. Not all the State Boards have legal officers and, even where they are there, their functions do not differ substantially from their counterparts in the CPCB. Since the State Boards are normally the ones, that are involved in the litigative process, the legal personnel recruited for the purpose are expected to possess the requisite knowledge and skill as to the procedural and substantive aspects of environmental laws. The expectations are belied as one goes through the litigation profile of different State Boards.²⁹ The higher judiciary has, time and again, reminded the Boards about these lapses in their litigation. The Gujarat High Court, in *Gujarat Water Pollution Board v. Kohinoor Dyeing & Printing Works*³⁰ insisted that the Board officers to take effective steps for the service of the summons upon the accused; prepare the case thoroughly; resist adjournments; seek exemplary costs to deter the accused from adopting dilatory tactics and vigorously pursue appeals in the superior court.

²⁷ These observations and those that follow as to the legal capacity of the Environmental Wing of governance, are drawn from the personal experience and interactions of the author during his stint as the coordinator of the Environmental Law capacity - Building project of the Government of India (From September 1997 to around December 2000 - the five year long on-going project on Environmental Capacity-Building project of Government of India supported by the World Bank, has several components like, Environmental Administration, Environmental Economics, Environmental hotspots and Gujarat, in addition to Law. The Centre for Environmental Law Education Research & Advocacy, in the National Law School of India University is executing the implementation of the Law component of the project.

²⁸ *Ibid.*

²⁹ *Ibid.* An analysis of the cases filed and decided in nineteen nineties, that were initiated by different State Boards (Karnataka, Tamil Nadu, Kerala, Maharashtra, Gujarat, Uttar Pradesh, West Bengal, Andhra Pradesh, Bihar, Madhya Pradesh, Delhi and Punjab & Haryana - are taken for the survey), show that quite a substantial number of cases (ranging from 30% to 60%) were lost by the Boards either because of the inability to grasp the substantive aspects of the law or in properly observing the procedures established under the law. A Draft Report of the Study is available at CEERA, National Law School of India University. Another study about the success rate of prosecutions of Central Pollution Control Board, has revealed that it could achieve conviction of 2.8 per cent among those reported to have defaulted under the law. See Singh, 'Legal Policy for Environmental Protection' in Leelakrishnan (ed.) *Law and Environment*, Lucknow, 1992.

³⁰ 1993(2), Guj. L.R. 1306

Even the personnel who actually implement the law (like inspection, investigation, sample-taking, etc.) do not always observe the mandatory procedures prescribed. As a result, the Boards have cut a sorry figure, before the Courts of law, by losing out to the polluters, even when they had excellent case on their side. The *Delhi Bottling Case*,³¹ is an excellent example of this. A case that was not contested as to the claims of the Central Board, that the industry did not conform to the prescribed standards, was lost on the technical ground by the governmental agency as it did not strictly observe the procedures prescribed under the Water (Prevention & Control of Pollution) Act, 1974.

Jurisdictional Questions

A plethora of authorities enforce different aspects of environmental laws. While, the pollution-related laws are primarily enforced by the Pollution Control Boards and the forest-related laws by the Forest and Wildlife Authorities, the management of other aspects of environment are entrusted to a variety of agencies, to function in a cooperative way. The Rules under the Environment (Protection) Act, 1986, require a number of agencies of State that include, the Revenue, Transport, Local Self-Government and Industry, besides the Pollution Control Boards to work in unison to achieve the desired results. One of the rules of interpretation of statutes insists that whenever a number of statutes deal with the same subject matter, they ought to be harmonious construed as to ensure that each one would complement and strengthen the other and avoid any kind of overlaps in jurisdiction.³² But, in practical terms super egos and poor understanding of the law have come in the way of cooperation and complementarity in the functioning of different agencies. The snowballing of the avoidable conflicts of jurisdictional question have led to different agencies of state taking irreconcilable positions and we are witness to strange sights of cases fought by them over the issue, in the courts of law. The courts of law too, have not really helped in the matter, by handing down confusing and conflicting decisions that neither reflect the true spirit of the law nor state the correct legal position.

One of the most familiar and oft-argued jurisdictional issue, pertains to the authority of the general administration and that of the Pollution Control Board. While, the general administration has the power to deal with every conceivable aspect of public nuisance,³³ the State Pollution Control Board is empowered to tackle pollution.³⁴ The problem of conflict of jurisdiction is perceived when the general administration attempts to initiate action over polluting activities, as amounting to public nuisance and the Pollution Control Board also arrives on the scene to deal with pollution. No uniformity exists in pronouncements of the different High Courts in resolving the conflict of jurisdiction question. In the *Tata Tea* case,³⁵ the Kerala High Court ruled against the exercise of jurisdiction by the General Administration, when the State Pollution Control Board was seized of the problem. It opined that since the specific pollution-related laws were complete codes designed to prevent pollution, they impliedly repealed the provisions of S. 133 Cr.P.C., to the extent they relate to prevention and control of pollution. However,

³¹ *Delhi Bottling Co. Pvt. Ltd. v. Central Board for Prevention & Control of Pollution*, AIR 1986 Del. 152

³² See Maxwell's Interpretation of Statutes.

³³ Section 133 of the Code of Criminal Procedure.

³⁴ Under both Water & Air, Prevention & Control Legislations.

³⁵ *Tata Tea Ltd. v. State of Kerala*, 1984 Ker.L.T. 645.

the Andhra Pradesh High Court, in the *Nagarjuna Paper Mills* case,³⁶ took the position that the exercise of jurisdiction by the Executive Magistrate (District Collector), under Cr.P.C. does not conflict with the authority of the Specialized Agency (Pollution Control Board), as long as it did not interfere with an order of the latter.³⁷ In a subsequent case,³⁸ the Divisional Bench of the Kerala High Court adopted the view of its Andhra counterpart by overruling the *Tata Tea* decision. The Karnataka High Court, in 1997, first chose to follow the *Tata Tea* ruling³⁹ and later, the same year, quickly retreated to subscribe to the approach of the Andhra High Court.⁴⁰ Perhaps, a more balanced position is taken by the Karnataka High Court which, in a later decision,⁴¹ found no conflict of jurisdiction between the two authorities and to construe the relevant legislations under which they exercise their respective power as complementary to each other.⁴² It also further clarified that in terms of functioning, the Pollution Control Board would, as a general rule, address itself to activities of greater complexity and of different magnitude (like industrial pollution), than minor and local instances of nuisance (like nuisance caused by a Poultry farm). The latter could, as a matter of fact and convenience, be addressed by the Magistrate under S. 133 Cr.P.C. upon a representation by an individual or a small group of people.⁴³ Extending further this logic, it could be interpreted that the jurisdiction exercisable by the two authorities can be concurrent, complementary and cooperative. While the “nuisance” could be tackled to maintain health, hygiene, law and order by one authority (Executive Magistrate), the dimension of “pollution” can be handled by the specialized agency (Pollution Control Board). Since such a classification is neither made by any legislative enactment, nor by the pronouncement of the apex court, as yet, the final word in legal terms, as to the resolution of conflict of jurisdiction, has not been said.⁴⁴

Environment Management Service

A comprehensive policy for environmental management, as would address and balance the imperatives for development and concerns for conservation, was evolved by Government of India, in 1992.⁴⁵ One of the major instruments for action, as stated in the policy document was, “to develop appropriate organizational structures and a pool of professional manpower to serve as the cadre for environmental management service”.⁴⁶

³⁶ *Nagarjuna Paper Mills Ltd. v. Sub-Divisional Magistrate*, 1987 Cri.LJ 2071

³⁷ In that case, the Sub-Divisional Magistrate ordered for the closure of the Paper Mills for its inability to take adequate measures in controlling water pollution. The decision of the general administration was based on a report submitted by the Superintending Engineer of the State Pollution Control Board.

³⁸ *Krishna Panicker v. Appukuttan Nair*, 1993(1) Ker.L.T. 771.

³⁹ *Executive Apparel Processors v. The Taluka Executive Magistrate*, 1997(4) Kar.L.J. 181

⁴⁰ *Harihar Polyfibres v. Sub-Divisional Magistrate* ILR 1997 Kar. 1139

⁴¹ *R.B. Gopala and Another v. The Sub-Divisional Magistrate & Another*, Cr.P. No. 736/97, Mar. 2000, Karn, H.C. (Saldanha J.)

⁴² *Ibid* at p.16.

⁴³ *Ibid* at p.15.

⁴⁴ In this context also see *Lakshmi Cement v. State*, 1994(2) Raj. J. 308, in which the Rajasthan High Court rejected the contention that the Section 133 Cr.P.C. stood impliedly repealed by the enactment of the law concerning air pollution.

⁴⁵ *The National Conservation Strategy and the Policy Statement on Environment and Development*, Ministry of Environment and Forests, Government of India (June 1992).

⁴⁶ *Ibid.*

Nine years down the line, all that one could discern in the system of environmental administration are, the elevation of the Environmental Minister from being a “Minister of State” to a regular Minister of Cabinet rank at the Central level and specialized group of personnel occupying lower positions while the top management positions remaining with the Generalist, Indian Administrative Service, as always.

The hiatus between policy prescriptions and actual practice is never bridged. Professionalized environmental management service continues to remain on paper only.

Budgetary, Infra-structural and organizational problems

What appears like an abdication of responsibility by statutory agencies, in discharging the functions assigned to them, requires to be viewed in the light of severe constraints under which they work. Severe shortage of personnel and poor and inadequate budgetary allocations, appear to have contributed to their less than satisfactory administrative performance. Withdrawal of prosecutions without assigning reasons,⁴⁷ launching prosecutions for pollution without verifiable standards or the instruments to test and convict the offender⁴⁸ and routine and cursory inspections forming the bases for initiating real action,⁴⁹ are mere indications of the malaise that has set in the system of environmental governance. With Boards in place without a recognized laboratory to analyze emissions and laboratories lacking in equipment to measure emissions,⁵⁰ as it prevails in a number of States, one cannot expect the statutory bodies to give a better account of themselves than what exists now.

There has been considerable progress in evolving excellent policies in the last couple of decades. A number of legislative enactments, during the same period, have helped in the creation and expansion of the environmental administrative set-up. The plan documents (especially from the fifth five year plan onwards), have repeatedly stressed on making the environmental enforcement machinery more efficient and broad-based (including popular participation in the decision-making processes). Building of proper infra-structural facilities has been considered, in all these documents, essential for the administration to give a better account of itself. Translation of these into actual practice with adequate budgetary allocations and ensuring a well coordinated and effectively functioning machinery of implementation is yet to take place.

Politicized, Bureaucratized and Lacking in administrative will

Environmental Governance in India, like any other aspect of governance, as an idea and at the level of conceptions, made a promising beginning. After initially raising a lot of hope it has lost its way and got so bogged down in politics and administrative inefficiency that the common man got compelled to look elsewhere for overcoming the environmental problems faced by him. This can be illustrated by reference to the

⁴⁷ As observed in *Mathew Lukose v. Kerala State Pollution Control Board*, 1990(2), Ker.L.J. 686, at 694

⁴⁸ *Mahabir Coke Industry v. Pollution Control Board*, AIR 1998 Gau. 10

⁴⁹ Severe shortage of personnel, has largely contributed to this state of affairs. One cannot expect handling of the affairs in more than a cursory fashion when statistics reveal that an inspector is required to cover anything between 500 to 20000 industrial units, as part of his working. See Harlarnkar, “Leaking Plugs”, *India Today*, 9 June 1997, p.69.

⁵⁰ *Supra* n.47.

National Committee on Environment Planning and Coordination (NCEPC). Following the observation made in the fourth five year plan document of the need to establish a national body to bring about greater coherence and coordination in environmental policies and programmes and to integrate environmental concerns in the plans for economic development, the NCEPC came into existence on 12th April, 1972, in the Department of Science and Technology. The national committee was intended to act as the advisory body to the Union Government on all matters concerning environmental protection and improvement besides planning and coordinating the working of different ministries concerning the subject. Initially, it was a fourteen members body having a large number of experts drawn from a variety of disciplines. The Fifth Five Year Plan (1974-79) insisted that the NCEPC ought to be involved in all major decisions concerning the industry, so that environmental concerns get duly addressed. The composition of membership got expanded from time to time (24 in 1977 and 35 in 1979). Each time there was an increase in numbers, the expert representation decreased! Over-bureaucratization, clash and conflict amongst various agencies represented and lack of consensus in the decision-making process, became the end result.⁵¹ Viewing the Committee as an unwelcome guest, absence of cooperation in its coordinated functioning and neglect by different departments of the government hit the final nail in the Coffin of NCEPC. The role of NCEPC in advising the Central Government and helping it to decide on the abandonment of the Silent Valley Project in 1983 (a project for damming the Kuntipuzha River in Kerala to generate electricity, that had the potentiality of destroying one of the richest biological and genetic heritages of the world, located in the Western Ghats)⁵² might, having the benefit of hindsight, have led the governmental agencies and the industrial lobby to view it as opposed to development. So it could have been that the body was viewed as an advisor not to be trusted or taken into confidence. Constitution of core expert groups to advice the government on matters of policy and implementation of law, especially when faced with an emergency situation or in response to a directive from the higher judiciary, has become a routine affair. In certain cases, it might appear that such a formation, to be in deference to the wishes of the judiciary. However on closer examination it becomes evident that the entire exercise invariably has resulted in enabling the government to buy time, postpone decision-making and when the reports are given, they remain at highest levels of abstraction as to become more of enunciation of principles and not real tools for better and effective implementation. The 1992 National Environment Policy Document⁵³ and Pollution Abatement Policy Document of the same year,⁵⁴ may be cited as illustrative of the fact of grandiloquent design, without much of a serious effort, at the implementational level, in giving effect to the hortatorial expressions in concrete terms.

⁵¹ See Shyam Divan & Armin Rosencranz, *Environmental Law and Policy in India*, 2nd Edition, Oxford University Press, New Delhi, 2001 (Hereinafter *Environmental Law & Policy*), at pp. 33 & 34 and pp. 424-431.

⁵² *Society for Protection of Silent Valley v. Union of India*, O.P. Nos. 2949 & 3025 of 1979. See also Diwan & Rosencranz, *ibid*, pp.424-430.

⁵³ Ministry of Environment & Forests, Government of India, National Conservation Strategy and Policy Statement on Environment and Development (June, 1992).

⁵⁴ Ministry of Environment and Forests, Government of India, *Policy Statement for Abatement of Pollution* (February 26, 1992)

Administrative high-handedness and non-observance of procedural formalities, in the implementation of the law, have often resulted in industries getting away with violations. In the *Suma Traders v. Chairman, Karnataka State Pollution Control Board*,⁵⁵ the Chairman ordered closure of the industry, on receipt and enquiry of the complaint received from the local residents against the air pollution caused by the food grain processing unit of the industry. The relevant provision of law,⁵⁶ required exercise of power by one upon due delegation of authority by the Pollution Control Board. On being challenged that the Chairman did not have the power to issue such an order, as he was not so authorized by the Board (as confirmed by the Board), the court held that the impugned order of the Chairman was in clear violation of the provisions of law and amounted to abuse of power. The court went a step ahead, in ordering the Chairman to pay a penalty of Rs.2500, by way of costs.

Political interference in appointments and in the day-to-day functioning of enforcement agencies have come in the way of these institutions developing into professionally competent and efficient bodies. The very general nature of qualifications required for the membership of Pollution Control Boards, including that of the Chairman,⁵⁷ have been taken advantage of by governments in making appointments in an arbitrary way. As a result of which it is not uncommon to find a political appointee presiding over the destiny of a specialized agency of State. There is this instance of a State Government going ahead with the appointment of a person as the Chairman of the State Pollution Control Board, mainly because the Chief Minister and the Minister of Environment and Forests of the State willed it that way. This was in spite of adverse remarks passed over the person in question by the authorities within the department and found unsuitable for the position by the Expert Committee, constituted for the purpose of making recommendations for the appointment of the Chairman. When this snowballed into a case before the High Court, the latter issued strictures against the government for arbitrary exercise of power with a direction to make a suitable appointment in place of the incumbent.⁵⁸

Another factor that is responsible for the environment enforcement agencies being viewed in poorer light is the phenomenon of several major industries like, Coal, Petroleum, electricity, iron and steel, agro-chemicals and heavy industries in the near exclusive control of the public sector - Government - controlled, operated and managed enterprises - with heavy government representation in their Boards. Since the top brass of state administration occupy positions of authority in them, there is marked reluctance on the part of the enforcers of environmental laws, who, invariably occupy lower rungs in the echelons of administration, in displaying the required administrative will in bringing to justice the deviants in the public sector.⁵⁹

⁵⁵ AIR 1998 Kar 8

⁵⁶ S. 31A of Air (Prevention & Control of Pollution) Act, 1981.

⁵⁷ The relevant provision (S. 4(2)(a) that refers to the qualifications of the Chairman of a State Pollution Control Board, under Water (Prevention & Control of Pollution) Act, 1974, states that the person should have special knowledge or practical experience on matters concerning environmental protection.

⁵⁸ *Jagannatha Pillai v. Government of Karnataka*, Writ Petition 3982/1995. The decision was delivered by the Karnataka High Court on 17.3.1997.

⁵⁹ See Michael R. Anderson, "Individual Rights to Environmental Protection in India", in Alan E. Boyle & Michael R. Anderson (eds.), *Human Rights Approaches to Environmental Protection*, Clarendon Press, Oxford 1998, at p.202.

Centralized and Non-participatory

The major problem with the law and its implementation concerning the environment, is the tendency to centralize power of decision-making. This, as a matter of fact, has turned out to be inimical to good environmental governance. It is quite understandable if the policy-making power is centralized with an apex expert group. But, as a matter of fact, the problem lies in the bureaucratized structure that is at the helm of affairs in the form of the agencies of the Central Government, which has the final authority of deciding on all aspects of environmental management. While scope exists for the involvement of expert bodies in aiding, advising and to make recommendations, the Central Government is, in the existing scheme of things, neither under a compulsion to put into effect what it gets from expert advice, nor for that matter, under an obligation to give reasons as to why its decisions differed from the advice received by it. Rule-making, laying down procedures for implementation and the power to issue directions to protect, maintain and improve the quality of the environment are all vested in the Central Government. Scope only exists in the law for delegation of powers of implementation as to different aspects of environmental administration. In making such a provision, care has been taken to ensure that the delegatee has to be nominated by the Central Government, the parameters of its functioning clearly spelt out by the latter and that would perform its assigned functions, under the direction, authority and supervision of the Central Government.⁶⁰ The Centralization of Power is so much that even the subordinate legislation under Environment Protection Act, framed by the Central Department of Environment and Forests, override any other Central or State legislation.⁶¹ The Central Government wields immense powers of decision-making as to every conceivable aspect of environmental management. Environmental clearance as to major developmental activities require central clearance.⁶² De-reservation of reserve forest or use of forest land for non forest purpose is possible only with the prior approval of the Central Government.⁶³ The current thinking as to administration of the pollution control regime, on the part of the Central Government appears to be in favour of arming the Central Pollution Control Board with many of the functions that are being exercised by the State Boards.⁶⁴ Some of the recent initiatives in decentralization by the Central Government have been less than sincere efforts in empowering the environmental administration at the grass-root level. The Joint Forest Management programme, for instance, enables the local village community to manage forest lands under the direction, supervision and authority of the forest department. It is more of a benefit-sharing arrangement, for the services rendered, in lieu of payment of wages for the labour.⁶⁵ Developmental decisions affecting the

⁶⁰ S. 3(3), *ibid.*

⁶¹ This is the legal position emerging out of a reading of S. 24 of Environment Protection Act. This understanding is strengthened by the decision of the Supreme Court in *S. Jagannath v. Union of India (Shrimp culture case)* AIR 1997 SC 811 at 846, in which the Coastal Regulation Zone Notification under Environment Protection Act was held to prevail over State legislations.

⁶² See Environment Impact Assessment Regulations, Notn. No. S.O. 60(E), January 27, 1994.

⁶³ S. 2, Forest (Conservation) Act, 1980

⁶⁴ See the discussion draft of a legislation in circulation, entitled, Environmental Laws (Amendment) Bill, 1999, initiated by the Ministry of Environment & Forest, Government of India and prepared by B. Ramiah, Former Secretary, Department of Law & Justice, Government of India.

⁶⁵ See M.K. Ramesh, "Joint Forest Planning & Management (JFPM) : Law, Practice and Proposals", paper presented in the Workshop on "Joint Forest Planning and Management and related issues", organized

environment are taken, both at the Central and State levels, by cursorily going through the processes of Environment Impact Assessment⁶⁶ and Public Hearings.⁶⁷ They are mainly aimed at going through the formality of giving some information to the local community of a proposed developmental activity and to hear their objections. No mechanism is evolved through these processes to ensure securing prior informed consent of the local community and making them participants and partners in the developmental process. Stakeholders' consultation and participation on matters affecting the environment, are yet to be practised. It is still very much a process of Government centred, centralized, environmental management. There is no guarantee that the objections raised by the local people in Public Hearings or even the concerns expressed at the state level administration would form part of decision-making at the Government level. The rationale for decisions about developmental projects is hard to find; in the rare case that it is isolated, it is not intelligently articulated. The arbitrariness of the entire process becomes evident as a member of the Environment Appraisal Committee for River Valley and hydroelectric projects finds that there had been no single instance of withdrawal of environmental clearance for violation of conditions by a large majority of project proponents.⁶⁸ Environmental governance, in the prevalent centralized system of management, has been anything but rational.

Poor Planning, Poor Maintenance of Records and Poor Vigilance

Laws get enforced without the requisite preparation of planning, documentation and constant surveillance. Pollution Control Boards are, at times, guilty of issuing consent orders without prescribing norms or ensuring capacity to comply with standards. In a case decided by the Karnataka High Court, it was found that the State Board had granted consent for stone crushing operations without examining its potential for environmental damage. The consent order was challenged on the ground of the adverse impact of the operations on the health of the residents of the locality and the crops grown nearby. The court, through its direction, educated the Government about the need for immediate formulation of a policy and a plan of action to regulate the business and identify 'safer zones' for stone crushing operations.⁶⁹

The administrative machinery is guilty of poor maintenance of records. The official records, instead of being a fund of up-to-date information, remain indifferently maintained. Detailed information as to the nature of activity, kinds of discharges resulting from operations, safety and precautionary measures as to potential mishaps, instances of violations and actions taken do not even routinely find space in the Registers of the Pollution Control Boards. The series of orders passed by the apex court in *T.N. Godavarman Thirumukpad v. Union of India*⁷⁰ exposed the ill-equipped feature of the forest and wildlife administration in the country. It brought to light the inadequacies in

jointly by Institution of Social and Economic Change, Bangalore and Samaja Parivarthana Samudya, Dharwad, April 11-12, 1995.

⁶⁶ *Supra*, n.62.

⁶⁷ Public Hearing, Notn. April 10, 1997, Ministry of Environment and Forests, Government of India

⁶⁸ Observation of Ashish Kothari, *See* Rosencranz & Diwan, *Supra* n.51 at p.420.

⁶⁹ *Obayya Poojari v. Karnataka State Pollution Control Board*, AIR 1999 Kar 157.

⁷⁰ Since 1997, the Supreme Court has passed over a dozen orders in the case. *See* for a detailed analysis of the case, Diwan & Rosencranz, *supra* n.51 at pp.294-308.

the official records as to various categories of forest and wildlife areas and the extent of encroachments in relation to them.

In the absence of making available information, on a regular basis, about different aspects of environmental management, the task of bench-marking or evaluating the potential and performance of different aspects of environmental management, the task of bench-marking or evaluating the potential and performance of different agencies of environmental administration is made all the more difficult. This also makes it difficult for the ordinary member of the public to make use of the available avenues for seeking and securing environmental justice. For instance, the provision for the citizens' suit under pollution-control law enables an ordinary member of the public to complain to the agencies of enforcement about alleged violations of environmental regulations and expect timely action from the latter to set right the wrong. It also enables him to initiate legal action against the alleged offender, after sixty days of complaint, if no or satisfactory action is forthcoming from the agency of enforcement.⁷¹ This tool of empowering the citizen is blunted, if he cannot access and obtain reliable, authentic and up-to-date information from the records available with the environmental managers. Success in his prosecution is possible only if such information is forthcoming, as this alone is admissible in evidence in Courts of law. No other private arrangements, without authentication and certification by the official machinery will do, to bring to book the evader of law through the court process.

Extremities in the Policies of Sentencing

The sentencing policies under different environmental laws swing from one extreme to another - from being too liberal to the other extreme of being too exacting. Both have had negative impacts in terms of effectiveness of enforcement. At one end of the Spectrum are the pollution-related laws. The Environment Protection Act provides a fairly severe set of penal sanctions.⁷² The effect of this stringent regulation is both nullified and rendered redundant by another provision in the same Act which states that if any act or omission constituted an offence punishable under this law as well as any other law, the offender would be liable only under the other law and not under EPA. Both Water Act⁷³ and Air Act⁷⁴ provide for relatively lesser punishment for the same offence. The result is that the stringent penal sanction under EPA becomes non-operational.⁷⁵

⁷¹ Section 19(b) of EPA ; S. 49(1)(b) of Water Act and S. 43(1)(b) of Air Act.

⁷² Section 15 lays down that for every violation there could be a prison term of five to seven years and a fine upto Rs. 1,00,000. Further, there could be an additional fine upto Rs.5,000, for every day of continuing violation.

⁷³ Sections 41 to 45A of Water Act.

⁷⁴ Sections 37 to 39 of Air Act.

⁷⁵ It must, however, be stated here that the penal provisions as they stand after amendments to Air and Water Acts, in 1987 and 1988 respectively, have to a large extent bridged the gap that existed with EPA and much of the anomaly in the policy of sentencing has been taken away. The glaring disparity in the sentencing policy between EPA, that had stringent regulations and the other two legislations (Water & Air Acts) which provided for ridiculously low penal sanctions, made Daryl D'Monte, an environmental activist describe EPA as a "Cobra that is seemingly fierce but has no venom in its fangs", quoted in Rosencranz and Diwan, *supra*, n. 50 at p.82; the position that prevailed prior to amendments, in a way explained the lower rate of convictions under Pollution Control laws and total neglect of the penal provisions under EPA. The enforcement agencies felt frustrated as a long court process led to imposition of inconsequential fines. A leading critique of Indian Environmental Laws, on observing this state of affairs, stated as follows:

At the other extreme are the penal provisions under Wildlife Protection Act, 1972. The rigour of the regulations and restrictions under the law are so severe that when once anybody gets booked for violations, it becomes almost impossible to secure acquittals. Since the law is stringent, the incidence of detection of crime and charging one for violation of the provisions and taking the route of courts of law for bringing the offender to justice are not a regular, everyday, routine occurrence. Even the courts of law expect strict compliance of procedures, adducing of evidences beyond a shadow of doubt and resort to strict construction of the penal provisions. Thus the rigour of the law makes securing of convictions quite rare and even when the offences occur, they get underground or enjoy patronage of the mafia and corrupt administration. Little wonder that convictions for violations of the law, all over the country, are few and far between. The foregoing depict the ground realities as to the limitations of legal facilitation for good environmental management and the inadequacies of the institutions and their personnel in effectively enforcing the laws. They also raise a variety of questions, that directly concern the competence and the nature of functioning of the courts of law in dealing with intricate and complex environmental issues. Apart from addressing questions as to adequacy, appropriateness, limits and limitations of judicial intervention, there is also a felt need to explore supplementary and alternative mechanisms to ensure good environmental governance, in this part of the world.⁷⁶

“Where the risks of penalties are low, a simple cost benefit analysis indicates that it is more cost effective for industries to pollute than to invest in emission control measures. Thus, despite the genuine efforts of many administrators, the implementation of India’s environmental management system has been disappointing”. See Michael R. Anderson, *supra*, n.55 at p.202.

⁷⁶ In a separate paper entitled “Environmental Justice: Courts & Beyond”, the author proposes to examine these issues.

INTRODUCTION

Given the fact of poor and ill-conceived nature of law and ill-equipped administrative apparatus in wrestling with the twin challenges of meeting the demands of development and the concerns of environmental conservation and protection,¹ attention naturally turns towards the third limb of the government - the judiciary - to examine its role in Environmental governance. This paper proposes to examine the role of judiciary at two levels: as facilitator and catalyst of better enforcement of laws and as pathfinder to the administration and panacea to environmental ills in India. This is followed by a critical overview of the downside of the formal frame, as symbolised by the hierarchy of Courts. The analysis ends off with the need to explore, recognise and evolve alternatives not as supplants and substitutes, but more as additional tools and techniques to broad-base environmental justice delivery in the country.²

JUDICIAL FACILITATION OF GOOD ENVIRONMENTAL GOVERNANCE: COMPLEMENTING & CATALYSING ENFORCEMENT

The enquiry, more specifically, as attempted in this chapter, is to find out whether the Courts of law have played a complementary role as to make the environmental administration more effective and efficient. The higher judiciary has, as could be seen from the following, often times, supplied the details of procedures to be adopted in implementing a law; overseen the stages and processes of enforcement; clarified doubts as to the circumstances when the discretionary power of administrator be put to use; facilitated inquiry to enable the enforcer find facts and with the help of expert advice, strengthened implementation in a more effective way.

JUDICIAL INNOVATIONS

Innovativeness, in putting to use the existing tools of justice delivery to facilitate better administration, has been the hallmark of judicial intervention over environmental issues. Reference to the following devices employed by the Courts, by way of illustration, would substantiate the observation :

Guidelines for Implementation:

By setting a detailed set of procedural guidelines for implementation, the Courts have constructively contributed for better enforcement. This can be illustrated by reference to what the Gujarat High Court evolved in relation to Public Hearing³ process. The notification on Public Hearing, was devised by the Minister of Environment & Forests, Government of India, to provide an opportunity for the local people to get to know about and participate in the process of decision making over developmental activities that are likely to affect their lives. It involves a specific process of eliciting suggestions, views, comments and objections by all the concerned. Existence of wide discretionary power in favour of the district administration in the choice of the method and manner of conduct of the process had resulted in its abuse and neglect. These, at times, gave the impression of enactment of a farcical drama. This prompted a public spirited action group approach the Gujarat High Court seeking its intervention to uphold the spirit of the law. The Court responded positively by enunciating a set of guidelines for proper conduct of Public Hearing.⁴

The order issued by the Court is, indeed, a model for the administration for its clarity and lucidity as to the stages in the implementation of the law on the point. It spelt out with great detail the most appropriate way of going about the process and the nature of preparation required for the same. It covered details as to the most suitable place of conduct of public hearing; the nature of publication of information about it; the kind and the quality of information to be made available for public scrutiny before the commencement of the process; the quorum and the nature of composition of the committee; making available information of the follow-up action leading ultimately to providing the gist of the environmental clearance and the like.⁵ While the primary obligation of working out the details of procedures for implementation remains with the administration, inconsistency and non-uniformity in their adoption and the cavalier attitude in the organization of the activity in its entirety compelled the court to intervene in working out the details of procedure. The outcome was, indeed, a welcome one as it enabled the administration to minimise arbitrariness in the Public Hearing process.

Continuing Mandamus

In any given case, as a general rule, once the judgment is passed it is left to the administration to execute the judgment so as to give effect to it. In the judgment, though the court issues directions to the agencies of the state as to how its decision has to be implemented, it will not be there to oversee its actual execution. Nor, would the court examine the extent of its implementation and the nature of its impact. The enforcement agencies, in a number of instances that involve public interest, are found to have taken advantage by postponing or not implementing decisions, under one excuse or another. It became a common phenomena, compelling the very people who successfully fought the case earlier, to approach the court again and again to activate an unwilling and recalcitrant administration in order to give effect to the judgment. So, while the judgments on a number of litigations in public interest were hailed as path-breaking, the misery and suffering of people, to ameliorate which the court was approached, continued unabated. Complacency, indifference and casual approach to human problems continued without much perceivable change, notwithstanding great judgments. This promoted the higher judiciary in recent times, to come up with yet another innovation: *continuing mandamus*.⁶ The technique adopted by the court is quite simple. Instead of passing a judgment and closing the case, the court would issue a series of directions to the administration, to implement within a time-frame, and report back to court from time to time about the progress in implementation. This, in a way, has helped people not turn cynical to landmark judgments rendered un-implementable or suffering the ignominy of non-implementation. The other advantage, more importantly, has been the extending of scope for the administration to be strengthened with the directions of the court, at every stage and clear the hurdles for effective implementation. This has further opened the avenue for the administration to plead with the court to revisit and modify its earlier directions, to make them more effectively implementable.

The case on point is the one concerning Vehicular Pollution.⁷ It started in 1985 as a case seeking directions from the apex court for closure of industries responsible for health hazards and to regulate pollution of the air caused by automobiles plying on the roads of Delhi and thermal power plant there.⁸ The case is yet to be finally decided. Instead, a series of orders passed by the Supreme Court that concern controlling vehicular pollution, is still in different stages of implementation.⁹ The court adopted a novel method in making the administration work. It made the government create a think tank, seek and secure expert opinion, make preparations for implementation of directions and report at every stage the progress made in achieving the objective. It was indeed an effort by the

judiciary to assist, partner and guide the administration in cleaning the atmosphere of Delhi and present a model for the rest of the country to emulate.¹⁰

Finding Facts

With the relaxation of procedural requirements in presentation of petitions in public interest, the higher judiciary began receiving complaints that required further probing, to be entertained as cases fit for its consideration. The administration in question, under such circumstances, were either not forthcoming or found themselves deficient in supplying the required information for the court to arrive at a decision. In order to enable the administration to keep their records upto date, while deliberating to take developmental decisions and function effectively, the courts began instructing the government to appoint fact-finding bodies and to follow it up with action or receipt of the report.

In *Banwasi Seva Ashram v. State of Uttar Pradesh*,¹¹ the complaint concerned efforts in the eviction of the inhabitants of the forest area by the Government, ignoring their claims, with the ostensible object of creating a reserve forest. The Supreme Court instructed the State Government to constitute a high powered Committee, to investigate the claims. Dubbing the already existing one as a biased committee, it ordered for a new one to be put in place. It even gave suggestion as to the composition of the body, so that it acted objectively and impartially. Upon being informed by the State Government, of making available the land under contention to the National Thermal Power Corporation (NTPC), the Court allowed for such a transfer only after extracting an assurance from the latter to provide certain facilities approved by it. The Court set out in detail the kind of safeguards to be taken to rehabilitate the oustees.¹² The rehabilitation package evolved by the highest court, indeed, became a model for the NTPC to later develop its own policy of Resettlement and Rehabilitation.¹³

Amicus Curiae (Friend of the Court) :

Over a number of public interest issues, the Courts of Law, have put to use the services of Law Practitioners as to extend beyond offering services to the parties to the suit. Especially in environmental litigations, there have been increasing instances of their getting entrusted with the functions of *amicus curiae*, to assist the Court to peruse, analyse and collate materials submitted by the parties. They may also be required to do research and make submissions to the Court on points of law. This assistance in tackling complex environmental and policy issues, has without doubt helped the Court of Law pay focussed attention to the issues on hand. Moreover, this device is of great utility in opening up fresh avenues for the parties, especially the administration, to freely interact, in an informal atmosphere and secure environmental justice.

The ecological problems created by stone crushing in the hills around Shimla (like devastation of forests; landslides and choking of hydrological systems), made the Himachal Pradesh High Court appoint a team of practitioners of law as *amicus curiae* to study the situation and evolve a legal solution, in the case of *Court on its Own Motion v. State of Himachal Pradesh*.¹⁴ This measure helped the court to frame a scheme to protect the eco-systems of the region while at the same time ensuring the economic interests of the quarry contractors were not adversely affected.

Special Commissions and Expert Opinions

In ascertaining facts, the Courts may, at times require the authorities to make available certain information through affidavits. When the Higher Judiciary is of the opinion that the information furnished is deficient, unreliable or unhelpful or when the concerned agency is not forthcoming in giving the information required, it may appoint Special Commissions to gather the required information and expert committees to examine scientific questions. Such appointments are made in exercise of inherent powers existing in the High Courts and Supreme Courts.¹⁵ The reports and findings so secured are invariably treated as *prima facie* evidence. In *L.K. Koolwal v State of Rajasthan*,¹⁶ the Rajasthan High Court relied upon the report about the unsanitary conditions in different parts of Jaipur, as submitted by the Commissioner appointed by it.

The *Irish Butter* case,¹⁷ involved enlisting of expert opinion. It was charged that the butter imported by the governmental agency for distribution in Bombay was irradiated on account of the Chernobyl disaster. The Supreme Court released the butter for distribution only after the expert committee reported that the butter was safe from contamination. Special Commissions and Expert Committees have not just been approached only for the purpose of getting expert opinion.¹⁸ They have, at times, been employed for the purpose of overseeing the implementation of the orders of the Court as well.¹⁹

Orders & Directions

Issuance of clear and specific orders for execution, resulting in tangible results has made judicial intervention effective and significant. They also, in a way, helped the administration perform their functions, effectively and without hindrance. These have, indeed, been very helpful for the administration do their duties without fear or favour. The host of orders and directions issued in *T.N. Godavarman Thirumulkpad v. Union of India*,²⁰ present a classic and illustrative example. Freezing all wood-based industries; regulating felling ; use and movement of timber across the country, catalysing the process of clear demarcation and recording of forested areas and many more forest conservation activities were achieved through this process.²¹

Jurisdiction Grabbing ?

These efforts of the higher judiciary are, without doubt, unprecedented. The measures appear to be an invasion over the administrative terrain. The courts, however, have denied any such usurpation. In their pronouncements,²² they have justified their action either under a statutory provision²³ or as an aspect of their inherent powers.²⁴ It is undeniable that the devices employed by the higher judiciary secured details of facts (when the information made available turned out to be sketchy), overcame complexities of social, economic and scientific issues (through expert testimony) and ensured continuous supervision of its orders. Environmental administration got a shot in the arm through such judicial interventions and innovations.

P.I.L. TO CURE ENVIRONMENTAL ILLS: AN EVALUATION

PIL, HUMAN RIGHTS & ENVIRONMENTAL JUSTICE

The constant increase in policy and administrative interventions of the higher judiciary is due to a variety of factors like - reposition of confidence in them by the litigating members of public, as the final resort of justice; - as a matter of sheer necessity to activate and make the administration function well²⁵ and - as an aspect of its legal and constitutional obligation of rendering justice.²⁶ The most commonly used vehicle for this purpose has been the instrument of Public Interest Litigation (PIL).²⁷ This has been by and large, a post-Emergency phenomenon in India.

The National Emergency declared in 1975 suspended all the political and civil rights of citizens. Soon after the Emergency was lifted, a group of activist judges at the highest court, in their attempt to reassert the institutional credibility as the protector of peoples' rights and to curb excesses of State, through the device of PIL, virtually opened the doors of the court entertaining petitions in public interest. The inspiration to Indian judiciary for the employment of this tool was, indeed, the post-World War II liberalism and the broad-basing of public interest law actions by the Supreme Court of United States.²⁸ More specifically, the manner in which Chief Justice Warren dealt with the problems of desegregation, discrimination and zoning through affirmative action in *Brown v. Board of Education*,²⁹ is believed to have given the required impetus for Public Service Lawyering everywhere. In course of time, PIL encompassed a wide range of issues including problems concerning environmental protection. The contributions of the Indian Supreme Court, followed and developed by the High Courts in different states, in this regard, is perceived as a broader judicial commitment to rectify the failure of other branches of government.³⁰

It must be noted here that while the higher judiciary in India is still expanding its proactive environmental friendly jurisdiction, its counterpart in the U.S. is in retreat, as evidenced in the case of *Steel Company, AKA Chicago Steel and Pickling Company v. Citizens for Better Environment*.³¹ The Supreme Court of U.S. denied standing and refused to exercise jurisdiction to a citizens suit for violations in the part by industries that failed to file timely reports of storage of toxic and hazardous chemicals. The following analysis of the use of the PIL device by the courts of law, for rendering environmental justice, attempts to highlight its positive and negative features.

POSITIVE ASPECTS

The positive impact of judicial intervention in relation to environmental problems has been such that it has dramatically transformed the form and substance of legal landscape in India. It has impacted the characterization of individual and collective rights guaranteed under the Constitution and the procedures established by law and practice in accessing them. This has also been responsible for creation of evolving new rights, approaches and principles to secure them.

Elevating Environmental problems to the status of violation of Fundamental Rights

The credit for the creation of a host of environmental rights and enforce them as fundamental rights, goes to the higher judiciary in India. This is very significant, as one learns from experiences elsewhere. The legal system may guarantee a Constitutional right to Environment and statutes may accord the right to participate in Environmental protection. However, when no tools for their protection is made available, then they are as good as non-existent. This is the experience in Spain,³² Portugal,³³ Brazil³⁴ and Ecuador.³⁵ Indian experience contrasts very significantly from this. There is no direct articulation of the Right to Environment anywhere in the Constitution or, for that matter, in any of the laws concerning environmental management in India. But this has been seized from below, by activist lawyers, motivating the courts to find and construct environmental rights from the available legal material. The salutary effect of such an articulation is of insulating the right, like any other fundamental right, from any legislative prescription or administrative action leading to its violation. Constitutional remedies, in the form of *writs*, are available for any violation of the right. One may approach the higher judiciary directly by challenging the state action for its violation.³⁶

What the courts have achieved in a little over a decade and half, is to view the fundamental right to life³⁷ to include different strands of Environmental rights, that are at

once individual and collective in character. Thus, in the *Doon Valley Litigation*,³⁸ the Supreme Court found the indiscriminate granting of licences to limestone quarries, that resulted in soil erosion, deforestation and silting of river beds, as affecting “the right of the people to live in a healthy environment with minimal disturbance of the ecological balance.”³⁹ Several High courts observed that environmental degradation amounted to the violation of fundamental right to life.⁴⁰

The content of the right, from its vague and general formulations, began getting viewed in far more clearer terms as the courts started addressing specific environmental problems. In a cluster of cases, it was considered as a right to protection of human health.⁴¹ Pollution free air and water as an aspect of the right got articulated in a few others.⁴² From characterising the right in a negative sounding obligation, the Courts have come up with the imposition of a positive obligation upon the State as to ensure enjoyment of the right to fresh, clean and potable water.⁴³ In *Mathew Lucose v. Kerala State Pollution Control Board*,⁴⁴ the Kerala High Court went a step ahead by holding that the discharge of effluents by a chemical industry, even when it was on one’s own premises, as violating the right to “clean air, water and wholesome environment.” An effort of municipal corporation to convert the land earmarked for a residential park into building a housing complex was thwarted by the Andhra Pradesh High Court. Such a measure, the court felt, was tantamount to violating the fundamental right to live in a well-planned hygienic environment.⁴⁵

Expanding Horizons of Human Rights

The courts, in the protection of the environment, through the device of PIL, have not found themselves shackled by the need to tag on to human rights alone. As a matter of fact, they have used human rights as a just vehicle to drive home the point of the close nexus between protection of environmental and human rights, unplanned economic activity that would affect either of the two have drawn court’s censure. This approach encompasses conservation of specific eco-systems, protection of other life forms and a holistic perspective of environmental management. In the *Centre for Environmental Law v. State of Orissa*,⁴⁶ a number of instructions were issued for the governmental agencies to observe while permitting any activity within the Bhitarakarnika Wildlife Sanctuary. The instructions were aimed at protecting the flora and fauna that were endemic to the region. In another case, the proposal for the Establishment of World Trade Centre on wetlands did not find favour with the Calcutta High Court, as such a move would have adversely affected the integrity of a very special eco-system.⁴⁷

Environment-friendly activities that protected traditional rights of people found favour of the courts of law in a number of instances. The *Aqua Culture* cases,⁴⁸ exemplify this stand of the judiciary, in which a number of directions were issued to caution against the practice of intense aqua-farming that violated a number of principles of good environmental management while, at the same time, encouraging promotion of traditional aqua-farming methods.

Protection of lives of birds, animals and wildlife and prevention of injury to them, both under Wildlife law and as an aspect of Environmental right, have engaged the attention of the superior Courts. Trading in articles of ivory, according to the court, under the Constitution, was akin to the pernicious activity of dealing in drugs and intoxicants. Trade and business at the cost of disrupting life forms and linkages necessary for the conservation of biodiversity and ecosystems, invited judicial censure and prohibition.⁴⁹

When the environmental right apparently conflicted with certain fundamental rights, especially the freedom of trade, profession or calling,⁵⁰ the courts have interpreted that the enforcement of public health care measures of ordering the closure of an industry for the release of polluted water into streets, as a reasonable restriction in public interest.⁵¹

Recognition of Customary Rights

The PIL tool has been employed by the Courts not just to enhance the status of a statutory right to that of a fundamental right, but to accommodate even traditional and customary entitlements to that status, as well. Thus, while in Gujarat, the diversion of a common grazing land was stalled⁵² and in Uttar Pradesh, the meadows and pasture lands in Garhwal region were prevented from being put to use to construct tourist lodges.⁵³

Protecting the interests of tribals and conserving forests

At times the judiciary, through their imaginative interpretation of laws, has been able to harmonize the interests of the forest-dwelling community with that of the concerns for conservation of the forests. In *Fatesang Gimba Vasava v. State of Gujarat*,⁵⁴ the legally recognized right of the tribals to obtain bamboo and earn livelihood by selling the articles made out of them, was attempted to be rendered unenforceable by the forest department officials by barring their transport from out of the forest area. The alleged motive of the action was to compel the forest dwellers to sell raw bamboo to the local paper mill. The court ordered that the forest department should not interfere in the transit of the bamboo articles from the forests to non-forest areas. In another case,⁵⁵ the Andhra Pradesh High Court struck down a government order that permitted felling of trees and transport of timber from the forest area that was in contravention of law.⁵⁶ The court reasoned that the statutory provisions were intended to safeguard the interests of Scheduled Tribes and to preserve forests. The executive order that violated this law was valid.

Promoting Right to Environmental Information

While the constitution guarantees the fundamental freedom of Speech and Expression,⁵⁷ no such guarantee exists for right to information, Right to access relevant and authentic information is very crucial over environmental issues. It enables one to know and understand about the kind of impact any activity would have on his environment besides forewarning about mishaps, helping in taking precautionary measures and facilitating participation in the processes of environmental planning and decision-making. In the absence of a clear legal articulation of such a right, it was left to the Courts to clearly carve out this right as an integral aspect of the freedom of speech and expression. A catena of case law exists that demonstrates judicial recognition of the right of the citizen to know as flowing from the fundamental freedom of speech and expression and the fundamental right to life and personal liberty.⁵⁸ Following on the recognition of a general right to information, the courts soon began getting into the specifics of the right. In a case that involved rejection of the demands of an environmental action group to access municipal records to examine the legality of certain of the actions of the Pune Cantonment Board, the Bombay High Court held that the right to know was implicit in the right of free speech and expression. As such, disclosures of information as to the functioning of the government should be the norm and secrecy an exception justified only where the strictest requirement of public interest so demanded, it opined.⁵⁹

Thus, one can access governmental information, without any requirement of proving any irregularity. It would suffice if the group were to establish its *bonafides* of action. In another case, between the same parties, the Supreme Court extended this right to all

persons residing within the area without limiting it to only interest groups and pressure groups.⁶⁰

Prevention of Abuse

Entertaining petitions in Public Interest and creating a highway for justice by the higher judiciary resulted in a phenomenal increase in initiation of judicial process by social action groups. While the courts have been more than accommodative in helping people access justice through this avenue, they have not hesitated in taking to task those who attempted to abuse the process. In a case, the Supreme Court found that the petitioner who failed to get the contract from a company for transporting the slurry discharged from the coal washeries, filed a Public Interest Petition claiming the discharge of untreated effluents into the Bokaro river by the company as having caused serious health hazards to the neighbours and sought the court's permission to carry away the slurry. It saw through the game of the petitioner, who intended to harass the company and derive commercial benefit through the action ostensibly in "public interest." The court categorically asserted that personal interest could not be enforced through the writ process and that it could not be used for the purpose of vindication of personal grudges or enmity.⁶¹

In another case, an industry used the arguments of atmospheric pollution, hazardous nature of activity and non-observance of siting guidelines against the neighbouring Solvent Extraction Factory, to pressurise the latter dispose of its plot of land in its favour so that it could expand its own industrial establishment.⁶² The Madhya Pradesh High Court came down heavily upon the petitioner with the remark, "the bogey of pollution should not be allowed to be raised for ulterior selfish motives by disgruntled litigants to hamper or stop the process of industrialization, and dismissed the petition."⁶³

Relaxation of procedures

In addition to the use of PIL to imaginatively interpret the law to make activities responsible for environmental degradation as violative of fundamental rights and promote Environmental rights, the courts have also found this as a convenient vehicle for people, especially of poor and disadvantaged sections, access justice. Through this, one is witness to the amazing ability of the higher judiciary in demystifying the law and its processes, by relaxing procedures, so as to empower the affected, aggrieved and concerned entities, ventilate their points of view in the judicial forum and secure justice when the same was not readily forthcoming from the other aspects of governance. Thus, a concerned citizen, who did not suffer a specific legal injury, was permitted to sue to arrest the damage in public interest and to uphold rule of law.⁶⁴ It has, indeed, been a trail-blazing effort that permitted volunteers to have 'representative standing' and a member of public, empowered, in his own right, to have 'citizen standing', in cases of executive in action or abuse, as a member of citizenry to whom a public duty was owed.⁶⁵ *Doon Valley* litigation,⁶⁶ *Ganga Pollution* cases⁶⁷ and the *Oleum Gas Leak* case,⁶⁸ are the early instances where the environmental concerns got judicial notice and approbation, through this device.

Thus, in the *Doon Valley* litigation, a letter that crudely highlighted the environmental problem and the callousness of the administration in addressing it was elevated to the level of a writ petition. In *Mahesh R. Desai v. UOI*,⁶⁹ a complaint by a journalist of the degradation of the coastal environment owing to unplanned development, promoted the Supreme Court to direct its Legal Aid's Committee to take up the case and issued notices to the concerned governments by invoking its writ jurisdiction. In the *Oleum Gas leak* case, the court allowed the party to bring into its consideration an unconnected cause of action, without the requirement of amendments to the petition. The firm conviction of the apex

court, in all these cases, has been that the requirement of sticking to the strict procedures and technicalities of the process, on matters of public interest, that includes environmental concerns, would defeat the ends of justice.

Broad-basing Environmental Administration

Another significant gain of the PIL process, has been the approach of the courts, in looking beyond Governmental institutions and formal structures of administration in managing the environment. In *Indian Council for Enviro-legal Action v. UOI*,⁷⁰ the supreme Court categorically asserted that it was impossible for a single authority, a governmental institution, exclusively and effectively control environmental damage. Environment is best protected by the people themselves and the governmental agencies should seek and secure the assistance of voluntary groups in this regard. The court even suggested more imaginative application of the relevant provisions of the Environment Protection Act, 1986, in broad-basic environmental administration.⁷¹

Evolving New Principles of Good Environmental Governance

Interpretations of the higher judiciary have been of such a nature as would telescope some of the Directive Principles of State Policy into the Fundamental Rights part of the Constitution, to secure constitutional guarantees of protection to the Environment. In addition, the courts are also to be credited with the ability of evolving principles, drawn from a variety of experiences, both within India and elsewhere, that has become the building blocks for good environmental governance, in recent times. The Polluter Pays principle, as laid down in the *Bichhri case*⁷² requires that the polluter bears the costs of cleaning up and compensate the victims of pollution. The precautionary principle, as elaborated in *Vellore Citizens' case*,⁷³ imposes an obligation on every developer, industry and governmental agency to anticipate, prevent and attack the causes for environmental damage and to demonstrate that the activities carried out are environmentally benign. In the landmark judgment in *Kamalnath case*,⁷⁴ the Supreme Court enunciated the *Public Trust Doctrine*. Setting at rest the role of the Government in Environmental management, the court held that the State occupies the position of a trustee of all natural resources. They are, as a general rule, meant for public use and enjoyment. The State has the primary obligation of using them for benefiting the public and not to divert it for any private benefit and enjoyment.⁷⁵ *The Sustainable Development Principle*, found expression in the *Ganesh Wood Products Case*⁷⁶ that combined the principle of Inter-Generational Equity, with it as well.

NEGATIVE ASPECTS

There is no denying the fact that PIL has enriched the content of the law, modified the traditional doctrine of *locus standi* and is responsible for devising new procedures for accessing and securing justice. However, the euphoria generated by the positive impacts of PIL has, over a period of time, exposed the drawbacks in the system of justice dispensation and the processes of accessing it, as well. The following are some of the short-comings, that deserve consideration of all concerned about Environmental justice.

PIL as Part of the Problem

The very same factors that justified the public spirited citizens to approach the higher judiciary, have turned out to be the hurdles for justice. Each of the factors like, the relaxation of procedures; doing away with the traditional requirement of *locus standi* and the very characterisation of public interest have become, in a manner of speaking, liabilities for rendering environmental justice. Instances of abuse of the process like,

attempting to settle personal grudges or to put undue pressures upon the respondent to do one's bidding,⁷⁷ have not become uncommon. What was considered an inexpensive and expeditious mode of redressal has taken decades to get settled. The *Vehicular Pollution Cases*,⁷⁸ is a classic example of the court being seized of the problem for over a decade and its final resolution is a long way in coming. The case that began its life in 1985 as a petition seeking the intervention of the Supreme Court for closure of hazardous industries and to regulate air pollution caused by automobiles in Delhi, has grown into a case of mammoth proportions and mired in controversies of administrative lethargy in implementation of the court's orders and political defiance bordering on contempt.

Taking advantage of the Superior Court's non-insistence on observation of technicalities, PILs are being filed with little or no preparation. Actions are initiated by filing complaints without proper evidentiary materials to support them. Expectations are that once a petition is filed, the court would do the rest. That, it would activate the administration, approach research bodies to suggest solutions, appoint commissions of enquiry to find facts and, when there are difficulties in the presentation of argument, it would find a counsel to argue for the petitioner or, still better, act as an *amicus* to help render justice! True, the courts have done all this and much more.⁷⁹ But, the heart of the matter is that most of the time, energy and resources of the judiciary is getting diverted for these purposes, so much so that the justice delivery system is under great stress and the cracks in it are becoming visible. The highest court, has shown its annoyance at taking every conceivable public interest issue to its door-step when compliance with the orders made at the local level, in most of the cases, would have prevented the docket explosion at the highest level. As early as in 1980, in the *Ratlam Municipal Council case*,⁸⁰ the Supreme Court upholding the orders of the Sub-Divisional Magistrate, expressed thus in unmistakable terms. Had the Municipal Council, the Court stated, spent half its litigative zeal of rushing from lowest to the highest court, in cleaning up the streets and complied with the orders issued at the local level, the civic problems would have been solved a long time back.

Individualistic Character

PILs as a general rule, are fought in public interest and decided for protecting the interests of a large number of people. But, there are certain alarming and emerging trends. One of the most significant ones has been that of the tool becoming personalized, individualistic and attention-seeking. There are instances of their identification with the personality of a judge or a litigant.⁸¹ It becomes a gamble when the outcome of the case depends on the judge before whom it gets posted.⁸² No doubt, the personality of the judge and the litigant, and their deep commitment to social justice and protection of the environment contributed, in a major way, to the evolution of the jurisprudence on the subject. But, without such a concern and commitment spreading and percolating to the different layers of justice-delivery, administrative arrangement and legal policies, in any significant way, it exposes the system to the dangers of facing a vacuum (in their absence) and becoming influenced by different whims and fancies that may pull governance in every possible direction. As a matter of fact, owing to this factor, Environmental legal advocacy, in India is getting exposed to this situation.

Scope for Arbitrariness and Inconsistency

Another danger of the phenomenon is the scope for arbitrariness and inconsistency in the entire process. Once the PIL process gets identified with certain judges and practitioners of law and the kind of impact their approach would have on the course of justice, it becomes very difficult to expect consistency and uniformity, both in approach and final outcome in similar cases argued and adjudicated in all other similar cases. The *Narmada Judgment*,⁸³ perhaps, presents a study in contrast, especially for the approaches

adopted and the conclusions drawn for the majority (of two) and by the minority (dissent of one) in the Supreme Court. The judges dealt with the same fact situation and profusely referred to the very same grounds. But, in the end, opinions differed between the majority and the minority. While the former approved of the execution of the proposed developmental project “for greater common good,” the dissenting opinion desired a thorough review of the entire decision-making process.

The Supreme Court, in a stunning judgment ordered shutting down of a number of hazardous industries in Delhi and relocate them beyond the capital city.⁸⁴ The sweeping closure orders appears to have improved the air quality and reduced risks to public health and safety in those parts of Delhi. But, the impact on the work force, was nothing short of being traumatic. The court order was used as an excuse by some of the managements to close their ailing establishments⁸⁵ and to postpone payment of compensation under some technicality or another, till clarification by the Supreme Court, two years hence, upon an application from the aggrieved workmen.⁸⁶ In a later case,⁸⁷ the apex court further clarified as to the obligation of the corporate entity to take all such precautionary measures as are required to ensure their activities did not cause harm or alarm in their establishments to such places where the residential areas could be kept wide apart from their location. It is interesting to observe the earlier version of the same case, in the Bombay High Court⁸⁸ produced a different kind of reasoning, diametrically opposite to the one adopted by the Supreme Court. There, the High Court rejected the contention of the petitioner to relocate the hazardous industry. The reasoning included, the need for locating an industry in close proximity of the area where the infrastructural facilities are available, that the dislocation would render thousands of workers jobless and make them suffer the trauma of displacement and that the situation demanded getting satisfied with taking appropriate safety measures in and around the place they are located.

Problems Resulting from Reliance on Expert Opinion

In dealing with the complexities of environmental issues, the higher judiciary has taken the initiative of seeking and obtaining expert advice to help them arrive at a decision. But there are instances when the opinions so obtained are either based on erroneous assumptions or insufficiency of data. In either case, the damage resulting from the decisions based on shaky scientific foundations may prove irreversible. The *Taj Trapizium* case,⁸⁹ may be cited to illustrate this point. In that case, in order to save the famed Taj Mahal from pollution and degradation the Supreme Court, relying upon the report of NEERI, ordered closure and relocation of several small-scale units, especially the foundries in the area. The Report, unfortunately was not based on all relevant facts and its methods, analysis and conclusions left a lot to be desired from a reputed scientific and research organization. While the implementation of pollution-control measures ordered by the court is proceeding at a tardy pace, the small scale sector which bare the brunt of the judgment is still to recover from its impact.⁹⁰

The *Vehicular Pollution Cases*⁹¹ presents another interesting, if not perplexing situation. While the Court ordered for conversion of vehicles to operate on Compressed Natural Gas (CNG),⁹² based on the expert opinion made available to it, the Tata Energy Research Institute (TERI) subsequently came up with the idea that Ultra-Low Sulphur Diesel (ULSD) could be a better option. As things stand now, the Delhi Administration has not, as yet been able to fully implement the orders of the apex court.

Non-exhaustion and Neglect of Other Remedies

Remedy for public suffering has been sought, with great degree of regularity by approaching the higher judiciary by taking recourse to the writ remedy. Non-technical nature of procedure, expeditiousness, economy, limited requirement of adducing detailed

evidence and reduction of the likelihood of prolonged litigation in appeals by directly approaching the highest court, have all contributed to this astounding phenomenon in India. But, the downside of it has been the blunting of other available tools of justice which, perhaps, are more appropriate and effective than the PIL route could achieve, at times.

It must be realized that the relief through PIL is general, prospective and, as a general rule, without compensation. On the other hand, in individual and private actions remedial orders are case-specific in nature and conclude with tangible and concrete results with clear directions for actual implementation. The Civil Procedure Code (CPC), provides scope for *Class Action Suits* or *Representative Suits* in which a number of people, having similar interests can bring action at the lower court level.⁹³ Such lawsuits enable clustering of issues and presentation of petitions and responses on behalf of a number of persons having the same interest. No separate lawsuit for each one would be required and the litigation cost could be shared by all the members of the group. Scope for adducing detailed evidence, through this process, lessens the strain on the Judges, which a writ process invariably imposes. This device can be employed in instances where mass torts occur, as attempted by Government of India on behalf of the victims of Bhopal Gas Disaster.⁹⁴ This was also initially employed in the *Ganga Pollution (Tanneries) Case*,⁹⁵ in proceeding against a number of polluters. Remedies available under specific environmental legislations, the common law and criminal law remedies are the other alternative avenues for justice delivery that could be prompt and effective. PIL process has been so abused that these options are scarcely put to use by all the concerned.

There is another danger of directly approaching the highest court. Since, in such cases, the outcome of the case is entirely dependent on the whims and fancies of the particular judge, should an adverse opinion be given by the court, it would mean the end of the road for the seeker of justice, as there is no one to receive further appeal. It would bring to an abrupt end the quest for justice without its realization.⁹⁶

Limits of PIL and the formal legal process

PIL is not always a smooth path to tread. Limits exist to the extent to which the law, its processes and the machinery of enforcement, even when it is positively inclined, can enforce duties, protect rights and secure redressal. This indeed, is the limiting factor of law itself. Habits, attitudes, patterns of behaviour and the like do not get altered overnight, even when the highest authority demands. PIL is more of a fire fighting mechanism. It cannot be expected to bring attitudinal change every time it is employed. Executive decisions do find a method of circumventing court orders, as to ensure that the ground realities do not get altered. Corporate entities have, time and again, demonstrated that they are adepts in taking advantage of situations, even when decisions apparently unfavourable to them are made. This is very well illustrated in the follow-up on the decision of the Supreme Court ordering relocation of hazardous industries.⁹⁷ It required another order of court,⁹⁸ that too two years hence, to redress the mischief of non-payment of compensation to the workers by the employers upon closure of the industries. It is true that the courts have devised the technique of continuing mandamus to appraise themselves of satisfactory compliance of their directions from time to time. But, it must be understood that this is intended to make the administrators and the addressees of the orders realise that their actions are being constantly monitored judicially.

The courts have not, as yet, evolved a mechanism for ensuring compliance with their directions both in letter and spirit, for all times to come. They do not have the tool that would assess the quality, content and level of compliance of their orders. Moreover, their

time is so stressed that they cannot even think of monitoring, on an individual basis, whether the instructions are indeed observed.

Even the practitioners of law, who take up public interest issues, *pro bono* (without charging a fee) are hard to come by. The work is enormous. It is back-breaking as, they are required to start from scratch without a ready-made case brought before them to argue.⁹⁹ Environmental legal advocacy requires a very high level of understanding of this emerging area of law and not many are there in India in taking up the challenge and successfully argue the cases before the higher judiciary.

Further “public interest” is not something that is homogenous and common, in the Indian context. There may exist divergent interests even among the claimants like, for example, among the people threatened with displacement for the execution of a development project, some of them may be satisfied with monetary compensation, some with alternative employment and others desiring to stay put and fight till they are totally rehabilitated.¹⁰⁰

Some of the principles enunciated by the Supreme Court are either vaguely formulated, a little confusing or not capable of implementation in its totality. The “Absolute Liability” principle formulated in the *Shriram* case¹⁰¹ referred to liability without fault upon the occupier of the premises for industrial accidents, escape or discharge of toxic substances.

The principle was sought to be applied in the *Vellore Citizens’* case,¹⁰² which did not involve any of the situations for which it was first applied. The latter case, rolled together the ‘polluter pays principle’ (applicable to non-toxic pollution cases) with the absolute liability standard (applicable to toxic torts).¹⁰³ In the *Bichhri* case,¹⁰⁴ the “polluter pays principle” extended the absolute liability for harm to the environment not only for compensating the victims of pollution but also the cost of restoring the environmental damage. The legal logic, apparently, has been stretched too far as to make it very difficult to implement.

Neither the legislature, nor the executive has taken kindly to this “judicial take over” of their functions. This assumption of “creeping jurisdiction,”¹⁰⁵ has not found favour with many of the judges themselves. In *Asif Hameed v. State of Jammu & Kashmir*,¹⁰⁶ the Supreme Court asserted that the constitution does not permit the court to direct or advise the executive in matters of policy or to sermonize on matters that lie within the spheres of activities of the legislature or executive. In the *Calcutta Taj Hotel Case*,¹⁰⁷ Justice Khalid advocated judicial restraint in PIL, so that the salutary type of litigation did not lose its credibility.

NEED FOR FRESH INITIATIVES

It is a humbling feeling that PIL, that started its life in India, to straighten and tighten the system of governance has, over a period of time, owing to some of its inherent weaknesses, not retained many of its therapeutic and curative qualities. PIL, as the highway for judicial justice, is experiencing a lot of wear and tear exposing many a pot-holes all along the way. Besides redefinition of its goals and relaying of the lanes that lead to them, a number of alternatives has to be evolved to supplement and strengthen the principal mechanism of environmental justice delivery.

The aberrations leading and resulting from environment justice delivery by Courts of law, require a fresh look at the system of environmental management in India. It has become a common occurrence for State administration and the Voluntary groups to take

turns to question the competence of the judiciary, each time its verdict did not meet either of their requirements. Taking the cue, the lawmakers, law enforcers and voluntary groups are constantly endeavouring to devise mechanisms to rein in the courts of law. The judiciary on the other hand appears to have done everything to add fuel to fire. It is time for a constructively critical evaluation of the environmental justice delivery breaks fresh ground for better environmental governance in India.¹⁰⁸

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1 See M K Ramesh, "Environmental Justice Delivery in India: In Context," 2 IJEL 2 (2001) 10.

2 Broadbasing environmental justice delivery system is the subject matter for a separate study.

3 First issued S.O. 318(E), Apr. 19, 1997; Gazette of India, Extra, Part II, Sec. 3(ii), Apr. 10, 1997, pp 3-4, No. 244 (No. 2012013/4189-1A.I).

4 *Centre for Social Justice v. Union of India*, Spl. Leave Appln. No. 8529 of 1999, Gujarat High Court.

5 *Ibid.*

6 In *Vineet Narrain v. Union of India and Anr.*, 1997(7) SCALE 656, popularly known as the 'Hawala case', the Supreme Court adopted this technique which enabled it to closely monitor investigations by Government agencies, in respect of serious accusation made against prominent personalities. According to the court, the innovation was a procedure within the constitutional scheme of judicial review to permit intervention by the court on the complaint of inertia by the Central Bureau of Investigation and to find solution to the problems.

7 *M.C. Mehta v. UOI*, wrt.ptn. (Civil) No. 13029 of 1985.

8 *M.C. Mehta v. UOI* (Vehicular pollution case), 1991 (2) SCC 353.

9 Some of the significant orders issued by the Court are the following: (i) clarification given as to the jurisdiction of the Environment Pollution (Prevention and Control) Authority for the National Capital Region (EPPCA), to extend to all aspects of environmental pollution in the region (AIR 1998 SC 617 & 773); (ii) Instruction issued to the Union Ministry of Environment and Forests to test the appropriateness of the suggested pollution control device (order dt. 14 Nov. 1990) ; (iii) Direction given to the Union Government to set up a high power committee to examine and recommend, in a comprehensive way, the technological, administrative and legal solutions for dealing with Vehicular Pollution ; (iv)

Directions to Government to ensure new vehicles were fitted with catalytic converters and lead free petrol was introduced in four metropolitan cities by April, 1995 (Orders dated 12.8.1994, 21.10.1994 and 28.3.1995, reported at 1997 (4) SCALE 4 (SP), 1997 (4) SCALE 5 (SP & 1997(4) SCALE 6 (SP); (v)

Direction to Central Government to convert its vehicles to operate on compressed Natural Gas (CNG) (Order dt. 26.4.1996, reported at 1997(4) SCALE 7 (SP), (vi) Endorsement of the suggestions of EPPCA like, fixing a time-frame for elimination of aged vehicles from operating on roads etc. (1998 (6) SCC 63 and AIR 1999 SC 291) and (vii) Imposition of Super norms (Bharat Stage I and Bharat

Stage II norms on the lines of Euro I and Euro II Norms) for vehicles registered in the National Capital Region (1999(6) SCC 12 & 14).

10 It is another matter that the court, in its enthusiasm to present such a model, got itself mired in the complexities of a problem that was at once political, economic and technological in nature. For a fairly detailed analysis of the case, See, Shyam Divan & Armin Rosencranz, *Environmental Law & Policy in India*, Oxford University Press, New Delhi (2001) 2nd Ed, pp.274-279. (hereafter Divan & Rosencranz).

11 AIR 1987 SC 374.

12 *Ibid* at 378.

13 For the Text, See *Rehabilitation policy & Law in India: A Right to Livelihood*, Fernandes W. and Paranjpye V. (Eds) Indian Social Institute, New Delhi 91997), at Pp. 331-344.

14 1994, FOR.L.T. 103.

15 Under Articles. 226 & 32 of the Constitution respectively.

16 AIR 1988 RAJ 2.

17 *Shivarao Shantaram Wagle v. Union of India*, AIR 1988 SC 952

18 In *M.C. Mehta v. UOI*, (Shriram Gas Leak Case), AIR 1987 SC 965 at 969, the Nilay Choudhary Committee was not only involved in advising the Supreme Court about the dangers of operation of the industry, it was also asked to suggest measures to reduce the environmental threats the plant posed.

19 In *Rural Litigation & Entitlement Kendra, Dehradun v. State of U.P.* (Doon Valley Litigation), AIR 1988 SC 2187, an expert committee evaluated the environmental impact of limestone quarrying operations in the region besides supervising the execution of the orders of the Court. A few of other committees appointed by the Court followed closely the reforestation measures undertaken by the Miners and the process of rehabilitation of miners whose business operations were closed without payment of compensation.

20 AIR 1997 SC 1228

21 For a detailed analysis and excerpting of the orders and directions issued by the Supreme Court in the case **See**, Divan & Rosencranz, *Supra*, n. 10 294-308.

22 For instance, in *Bonded Labourer's case*, AIR 1984 SC 802.

23 Order XXVI CPC and Order XLVI of Supreme Court Rules, 1966.

24 Inherent power of the Supreme Court under Arts. 32 and of the High Courts under Art. 226 of the Constitution, *See, L.K. Koolwal v. State of Rajasthan*, AIR 1988 RAJ 2.

25 Chs. II & III. **See**, n.1.

26 This aspect is dealt in detail in this part of the paper.

27 In the Indian context, some of the legal scholars prefer the expression "Social Action Litigation" to "Public Interest Litigation", as this tool for justice to protect basic rights of individuals and communities has, through innovations of higher judiciary in India, for richer content in both

substantive and procedural aspects of law for greater positive impacts on the social lives of the people in India than the United States, where the PIL movement took roots. See, Baxi, Upendra, "Taking Suffering Seriously: Social Action

- Litigation in the Supreme Court of India,” in Tiruchelvan & Coomaraswamy, (Eds.) *The Role of the Judiciary in Plural Societies* (London, 1987).
- 28 See, Chayes, “Foreword : Public Law & Litigation and the Burger Court,” 96 *Harvard Law Review* 4 (1982) ; See, *Sheela Barse v. U.O.I.*, AIR 1988 SC 2211.
- 29 349 U.S. 294 (1955).
- 30 Francois Du Bois, “Social Justice & Judicial Enforcement of Environmental Rights & Duties”, in Boyle & Anderson, (Eds.) *Human Rights Approaches to Environmental Protection*, Clarendon Press, Oxford (1998), at p. 156.
- 31 U.S. Supreme Court dt. 4 Mar. 1998.
- 32 Art. 45, Para 1, contains a right to enjoy an “environment suitable for the development of the person”. It is more of a statement of policy, disguised in the language of rights. Similarly are the provisions worded in the constitutions of Austria, Greece and Netherlands, without really providing a means for their enforcement. See, S. Douglas - Scott, “Environmental Rights in the European Union - participatory Democracy or Democratic Deficit”, in Boyle & Anderson (Eds.), *supra*, n.24, at pp. 110-111.
- 33 Art. 66. It has a very limited individual action to enforce it. See, S. Douglas - Scott, *Ibid*.
- 34 Art. 335 recognizes the collective right to a balanced environment. The enforcement of the right is not in the hands of either the individual or the collectivity. See, Edesio Fernandes, “Constitutional Environmental Rights in Brazil”, in Boyle & Anderson(Eds.) *Supra*, n. 24 at 276-284.
- 35 Art. 19(2) guarantees the fundamental human right to an environment free from contamination, without prejudice to other rights necessary for a complete moral and material development. No substantive tools exist for their protection. See, Adriana Fabra, “Indigenous Peoples, Environmental Degradation and Human Rights: A Case Study”, in Boyle & Anderson (Eds.) *Supra* n. 24 at p. 251.
- 36 Art. 32 to approach the Supreme Court and Art. 226 in accessing the High Court of a State.
- 37 Art. 21
- 38 *Rural Litigation & Entitlement Kendra v. State of U.P.*, AIR 1985 SC 652
- 39 *Ibid* at 656
- 40 See, *Arvind Textiles v. State of Rajasthan*, AIR 1994 RAJ 195 AT 197 ; See, *Madhavi v. Tilakan*, 1988 (2) KER.L.T. 730 at 731 ; See, *Kinkri Devi v. State of Himachal Pradesh*, AIR 1988 HP 4 at 9 ; See, *V. Lakshmipathy v. State of Karnataka*, AIR 1994 KAR 57 at 67 ; and See, *K.C. Malhotra v. State of Madhya Pradesh*, AIR 1994 MP 48 at 52
- 41 In *Koolwal v. Rajasthan*, AIR 1988 Raj 2, poor sanitary conditions in the city of Jaipur was considered to be in violation of the right to human health. Similarly, in *Virender Gaur v. State of Haryana* 1995(2) SCC 577, hygienic environment was regarded as an integral facet of right to healthy life.
- 42 See, *Charan Lal Sahu v. UOI* AIR 1990 SC 1480
- 43 See, *Attakaya Thangal v UOI*, AIR 1990(1) KER L.T. 580
- 44 1990(2) KER L.R. 686
- 45 *T. Damodar Rao v. S.O. Municipal Corporation of Hyderabad*, AIR 1987 AP 171

46 1998(86) CLT 247

47 *People United for Better Living in Calcutta v. State of West Bengal*, AIR 1993 Cal. 215. The project was later permitted to take off after the court was satisfied of safeguards proposed for environmental protection. **See**, Diwan & Rosencranz, *Supra* n. 10 at p. 507.

48 **See**, *S. Jagannath v. UOI*, 1997 2 SCC 87 ; *Gopi Aqua Farms v. UOI*, 1997 6 SCC 577 and *Kholamuhana Primary Fisherman Cooperative Society & Ors. v. State of Orissa*, AIR 1994 Ori. 191.

49 *Ivory Traders and Manufacturers Association v. UOI*, AIR 1997 DEL 267

50 Art. 19(1)(g).

51 Art. 19(6), **See**, *Abhilash Textile v. Rajkot Municipal Corporation*, AIR 1988 Guj. 57.

52 *Nabipur Gram Panchayat v. State of Gujarat*, AIR 1995 GUJ 52.

53 *Omprakash Bhatt v. State of U.P.*, AIR 1997 ALL 259.

54 AIR 1987 G U J 9.

55 *Shankar Reddy v. State of A.P.*, 1992(2) A N D H. L.T. 514

56 Ch. III A of the Andhra Pradesh Forest Act, 1967. It prohibited the transfer of any forest or forest produce or the denudation of a forest, without the prior approval of the District Collector.

57 Art. 19(1)(a).

58 As enshrined in Arts. 19(1)(a) & Art. 21. **See**, *State of U.P. v. Raj Narain*, AIR 1975 SC 865, **See**, *S.P. Gupta v. UOI* (Judges' Transfer Case), AIR 1982 SC 149 and **See** *Reliance Petrochemicals Ltd. v. Proprietors of Indian Express Newspapers Bombay Pvt. Ltd.*, AIR 1989 SC 190.

59 *Bombay Environmental Action Group v. Pune Cantonment Board*, Bombay H.C., A.S. Writ Petition No. 2733 of 1986, 7 Oct. 1986, excerpted in Diwan & Rosencranz, *Supra* n. 10 pp. 162-163.

60 *Bombay Environmental Action Group v. Pune Cantonment Board*, Supreme Court of India, SLP (Civil) No. 11291 of 1986, 13 Oct. 1986.

61 *Subhash Kumar v. State of Bihar*, AIR 1991 SC 420 at 424. In *Chhetriya Pradushan Mukti Sangharsh Samiti v. State of U.P.*, AIR 1990 SC 2060, the tactic of the petitioner in using the PIL to blackmail people was exposed and the court refused to intervene in the situation.

62 *Jayant Vitamins Ltd. v. Rampur Distillery & Chemical Co. Ltd.*, 1992(3) COMP. LA. JR. 1.

63 *Ibid*, at 13

64 *S.P. Gupta v. Union of India* (Judges' Transfer Case), AIR 1982 SC 149, 194.

65 For an interesting analysis of relaxation of procedures as to Standing to sue **See**, Diwan & Rosencranz, at 135-139.

66 AIR 1985 SC 652.

67 AIR 1988 SC 1037 and 1115.

68 AIR 1987 SC 965.

69 Wrt. Ptn. No. 989 of 1988.

70 1996(5) SCC 281.

71 The reference was to two specific provisions under EPA. S. 3 of the Act, empowers the Central Government to constitute one or more authorities to perform such of its functions under S.5 of the Act.

72 *Supra* n. 64. **See also**, *Vellore Citizens' Welfare Forum v. UOI (Vellore Citizens' Case*, AIR 1986 SC 275.

73 *Ibid.* Also See, *A.P. Pollution Control Board v. Prof. M.V. Nayudu*, AIR 1999 SC 2468, 2505 and *S. Jagannath v.UOI (Shrimp Culture Case)* AIR 1997 SC 811, 846.

74 *M.C. Mehta v. Kamalnath (Span Motels Case)*, 1997(1) SCC 388, followed in *M.I. Builders v. Radhey Shyam Sahu*, AIR 1999 SC 2468 at 2498.

75 The principle, evolved in an interesting way. The inspiration was without doubt the *MonoLake case (National Audibon Society v. Superior Court of Alpine Country*, 33 Cal 3d 419), in which the Californian Supreme Court made use of the doctrine. While, it was a gradual process of evolution of the principle in U.S., the rule found expression, all of a sudden, in the Indian case.

76 *State of Himachal Pradesh v. Ganesh Wood Products*, AIR 1996 SC 149, 159, 163.

77 **See**, *Supra*, n 61, n 62, and n.63.

78 *M.C. Mehta v. UOI*, Wrt. Ptn. (Civil) No. 13029 of 1985.

79 **See** Diwan & Rosencranz, *Supra* n. 10, pp. 141-145.

80 *Municipal Council, Ratlam v. Vardhichand*, AIR 1980 SC 1622.

81 **See**, Diwan "Cleaning the Ganga", EPW, 1 July 1995, 1551, in which the activist role played by Justice Kuldip Singh & M.C.Mehta in Ganga Pollution and other cases finds mention.

82 Relaxation of procedures to enable the indigent impoverished and underprivileged ones access the portals of justice is considered to be the lasting contribution to the judicial process by the Judges like Krishna Iyer & Bhagwati. Both the judges, having served on the National Committee on Juridicare that in its final report expressly recommended for widening the rule of *locus standi* to facilitate PIL

(*Report on National Juridicare : Equal Justice - Social Justice*, 61(1977), Govt. of India, Ministry of Law, Justice & Company Affairs), began implementing their own recommendations in their judgments, that liberalized standing, fostered legal service institutions for the weak and disadvantaged sections of society.

83 *Narmada Bachao Andolan v. UOI*, Wrt. Ptn. (c) NO. 319 of 1994, 18 Oct. 2000. A three member Bench comprising of Chief Justice A.S. Anand and Justices S.P. Bharucha and B.N. Kirpal, decided the case. The dissenting opinion was given by Justice Bharucha.

84 *M.C. Mehta v.UOI*, AIR 1996 SC 2231.

85 **See**, N. Dasgupta, "Tall Blunders," *Down to Earth*, 30 Sept. 1998, p. 22.

86 *M.C. Mehta v. Union of India*, 1999(2) SCC 91.

87 *F. B. Taraporawala v. Bayer India Ltd.*, AIR 1997 SC 1846.

88 *Bayer (India) Ltd. v. State of Maharashtra* 1994(4) BOM.C. REP. 309, 353.

89 *M.C. Mehta v.UOI*, AIR 1997 SC 734.

90 **See**, Raghuram, "The Trouble with the Trapizium," *Down to Earth*, 15 Apr. 1996, p. 32 and the Report of the Tripathi Committee set up by the Uttar Pradesh Government in 1994 to study the impact of the pollution on the Monument, cited in the same article.

91 See, *Supra*, n. 72
92 Order dt. 26 Apr. 1996 (4) SCALE 7 (SP)
93 Order 1 Rule 8, CPC 1908
94 As provided under Bhopal Gas Leak Disaster (Processing of Claims) Act, 1985
95 AIR 1980 SC 1037, 1038
96 Once a writ petition is rejected on its merits by the Supreme Court or a High Court, no subsequent writ petition can be moved in the same court on the same course of action. It also precludes a petition to Supreme Court for alleged violation of a fundamental right, if the High court had dismissed the petition earlier on merits. See, *Daryao v. State of U.P.*, AIR 1961 SC 1457, 1465, 1466

97 *Supra*, n. 78.
98 *Supra*, n. 79 and n. 80.
99 See Public Interest Litigation, Anuradha Rao, Public Affairs, Centre, Bangalore (1999), p. 23.
100 *Ibid.*
101 *M.C. Mehta v. Union of India (Shriram Gasleak Case)*, AZIR 1987 SC 965.
102 *Vellore Citizens' Welfare Forum v. UOI*, AIR 1996 SC 2715.
103 See, Diwan & Rosencranz, *Supra*, n. 10, P. 111.
104 *Indian Council for Enviro-Legal Action Litigation v. UOI*, AIR 1996 SC 1446.
105 U. Baxi "Taking Suffering Seriously : Social Action Litigation in the Supreme Court of India," 29 *The Review* (International Commission of Jurists), Dec. 1982, 37.
106 AIR 1989 SC 1899.
107 *Sachidananda Pandey v. State of West Bengal*, AIR 1987 SC 1109.
108 This would form the base for analysis in the third and final of the series of articles on the subject. The article is proposed to be carried in the next issue of the journal.



Supreme Court and India's Forests

ARMIN ROSENCRANZ, SHARACHCHANDRA LÉLÉ

The T N Godavarman vs Union of India case in the Supreme Court, also known as the “forest case”, is an example of the judiciary overstepping its constitutional mandate. The court has effectively taken over the day-to-day governance of Indian forests leading to negative social, ecological and administrative effects.

In 1995, T N Godavarman Thirumulpad filed a writ petition with the Supreme Court of India to protect a part of the Nilgiris forest from deforestation by illegal timber felling.¹ The Supreme Court clubbed the Godavarman case with another writ petition with similar issues,² and expanded its scope from ceasing illegal operations in particular forests into a reformation of the entire country's forest governance and management. In its first major order in the Godavarman case on December 12, 1996, the court *inter alia* re-defined the scope of the Forest Conservation Act 1980, suspended tree felling across the entire country, and sought to radically re-orient the licensing and functioning of forest-based industries. Subsequently, more than 2,000 interlocutory applications have been admitted,³ and several hundred orders have been issued, many with far-reaching implications. But the case is still pending in the Supreme Court. In the process, the court has gone far beyond its traditional role as the interpreter of law, and assumed the roles of policy-maker, lawmaker and administrator.⁴

The Supreme Court's assumption of such vast powers has no precedent, either in India or in other developing countries. While the initial orders may have been justified, the implications of this sweeping and continuing intervention by the judiciary are far more double-edged than celebratory accounts of the Godavarman case⁵ suggest. Indeed, the time has come to call a halt to this judicial adventurism and focus on improving the quality of forest-related jurisprudence.

From Reinterpretation to Execution

The Supreme Court began by reinterpreting the meaning of “forest” in the Forest Conservation Act (FCA) of 1980. The FCA essentially requires central government approval for conversion of forest land to non-forest purposes. Till 1996, the FCA

was assumed to apply only to reserve forests. The Supreme Court said the act applied to all forests regardless of their legal status or ownership.⁶ It also redefined what constituted “non-forest purposes” to include not just mining but also operation of sawmills. But it did not stop at reinterpreting the law for the cases at hand. The Supreme Court ordered all such non-forestry activities anywhere in the country that had not received explicit approval from the central government to cease immediately. It also suspended tree felling everywhere, except in accordance with working plans approved by the central government. It completely banned, with minor exceptions, tree felling in three whole states and parts of four other states in the forest-rich north-east. It ordered saw mills to close down not only where a complete ban was directed but even within a 100 km radius of Arunachal Pradesh's state boundary. Finally, it banned any transportation of timber out of the north-east states.

Very quickly, the court got sucked into a whole maze of administrative and management issues. Disposal of felled timber, timber pricing, licensing of timber industries, felling of shade trees, budgetary provision for wildlife protection, disposal of infected trees, determination and utilisation of the compensation paid for conversion to non-forest purposes, confidential reports of forest officers, and even painting of rocks in forests – all became grist to the Godavarman mill.⁷ The court created high powered committees, authorities and a fund for compensatory afforestation. Eventually, as the number of matters coming to the court spiralled out of control (due to its own expansion of the case) it got a central empowered committee (CEC) set up under section 3(3) of the Environment (Protection) Act, 1986.

More importantly, the court insulated the committee's members from their roles as central government employees, delegated wide-ranging powers to it to dispose matters in accordance with the orders of the court, and made the committee answerable only to the court. The court has kept the case open under a “continuing mandamus” and continues to hear and dispose a large number of interlocutory applications every month. To maintain

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control of the case, it has excluded the jurisdiction of all lower courts in forest matters. The Supreme Court has become an executor and administrator of the law.

Justification

The court's justification for such a dramatic intervention was the critical state of forest cover and the non-responsiveness of the governments concerned. Certainly, in 1996, the state of forest conservation in the country was generally poor, that indiscriminate felling (legal and illegal) was common in the north-east,⁸ the FCA had become simply a procedure that still permitted large development projects to go through, and mining permits had been given out in contravention of the FCA in many parts of the country.

Forest records in the country were (and continue to be) in a mess. It is equally true that the state governments were quite apathetic in their response to the court's notices, especially prior to December 1996. The court had to use its power of "contempt" to evoke responses, and get its

orders implemented. Subsequent behaviour of the state and central governments has not indicated a strong commitment to forest conservation or a carefully thought out balancing of local needs and forest sustainability. For instance, senior bureaucrats in Maharashtra state consciously violated the court's ban on sawmill licensing, eventually attracting contempt action. The response from the government of Meghalaya was simply to ask that all unregistered clan, community or individually owned forests be recognised as "plantation forests" in order to exclude them from the court's orders.

The ministry of environment and forests (MOEF) has tried to roll back the court's interpretation by proposing a re-definition of "forests" as "legally notified forests".⁹ Given this state of forest governance in the country, a wake-up call was required. Not surprisingly, the conservationist community in the country has been generally very enthusiastic about the court's intervention. Many see the CEC and the Supreme Court as the only conser-

vation-minded elements in the state apparatus today.¹⁰

Overstepping Its Bounds

But is this level of intervention by the judiciary in the day-to-day governance of the country's forests constitutionally defensible?¹¹ While the doctrine of separation of powers does not find explicit enunciation in the Indian Constitution, the court has over the years elevated the separation of powers to the basic inviolable structure of the Constitution in the landmark judgment in *Kesavananda Bharati vs Union of India*. The judiciary's role is therefore primarily one of interpreting the law, resolving contradictions between laws and with the Constitution, and protecting the basic structure of the Constitution.

At the same time, the Indian Constitution endows the judiciary with certain extraordinary discretionary powers and powers of judicial review. Moreover, the court has innovatively read the right to a healthy environment into Article 21 (right



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to life) and thereby equated it to a fundamental right. The court's orders in the Godavarman case could therefore be justified by arguing that to enforce the right to life, the government has the legal responsibility to effectively conserve forests and protect biodiversity. The government's past inaction can be viewed not as exercises in executive discretion, but as violations of statutory responsibilities, and therefore of the law.

There is, however, ample basis to argue that, in its zeal to protect the right to a clean environment, the Supreme Court has, through a series of measures, strayed far beyond even this fuzzy boundary between the judiciary and the executive. Firstly, it has gotten involved in micro-management to a level that simply cannot be considered as falling within its purview – whether it is defining the value of forests across the country, banning the transport of timber, determining the location of sawmills outside forest lands, or giving permission for pruning of shade trees in coffee plantations. Secondly, it has created a quasi-executive structure (the CEC) that, while legally notified, functions in a manner that is at complete odds with the separation of powers, since it is nominated by and reports only to the court. Not surprisingly, the court eventually had a confrontation with the MOEF, which sought to exercise its statutory right to constitute the forest advisory committee under the FCA, an issue that still remains unresolved.¹²

Thirdly, the court has extended its assumption of powers beyond any reasonable time frame. The notion of “continuing mandamus” is not envisaged by the Constitution. Its past use by the court has been carefully calibrated and justified for “extraordinary cases” where the court wanted to ensure that the execution of its orders was not being tampered with, not to interfere in the other functions of the executive.¹³ In the Godavarman case, however, the court has kept the case open for more than 11 years now, during which it has essentially administered the law – deciding on applications that would normally be dealt with by the executive – thereby breaching constitutional limits.

Finally, there are severe practical limitations to what the court can actually do.

The courts of India do not have the resources or the capacity to investigate and ensure implementation of orders that go beyond individual cases. Enforcing orders even in individual cases has proved hard enough, as in the Bandhua Mukti Morcha case.¹⁴ The irony lies in the fact that the court itself has recognised that it has “no means for effectively supervising and implementing the aftermath of [its] orders, schemes and mandates... Courts also have no method to reverse their orders if they are found unworkable”.¹⁵

Mixed Outcomes

It is not even clear that the ends justify the means – that the outcomes justify this heavy-handed and continuous intervention in forest governance. The results are mixed, at best. Certainly, many irregularities in the implementation of the FCA have been brought to light and many illegal activities have been shut down. Dramatically increasing the value of compensation to be paid for converting forest to non-forest may act as a deterrent to commercial interests who want to convert forests into tourist resorts or golf courses. For the first time, some states, such as Bihar, actually examined how many sawmills their forests could sustainably support, and brought their licensing policy in line with this capacity. Moreover, by entertaining so many interlocutory applications, the court has given greater access to the decision-making process on forests than the MOEF or state governments typically gave. And there is willy-nilly greater “transparency” in the procedures through which the conversion of forest to non-forest takes place, since much of them are discussed in the court or in CEC hearings.

But the Godavarman orders have also had many negative impacts, socially and even ecologically, and certainly governmentally. The ban on felling severely hurt local forest owners, labourers and forest-based industries (many locally owned) in the north-east. The ban has perversely led to trees being felled for charcoal or firewood, since the ban was only on felling for and movement of timber.¹⁶

The Supreme Court triggered a series of mistakes in the MOEF's handling of the question of forest encroachment. The court-appointed amicus curia (in this case

Harish Salve) suggested that states were allowing encroachments despite the court's directives. Motivated by the Supreme Court's attention to the matter, the MOEF unilaterally issued a directive on May 3, 2002 to all states requiring that they summarily evict all illegal (post-1980) encroachers on forest land, and to complete the process by September 30, 2002, ie, five months.¹⁷ This directive was both impracticable, given the magnitude and complexity of the encroachment issue, and also completely in contradiction with the MOEF's own earlier (1990) detailed guidelines of how such matters should be dealt with.¹⁸ The May 2002 MOEF circular led to a series of ruthless and often substantively unfair evictions in various parts of the country, sparking protests and hardening attitudes against the court and the state in tribal areas already under the influence of Naxalism.

The Godavarman case has also led to further concentration of power in the centre vis-à-vis the states. Working plans, even for individually owned forest patches, must now be centrally approved. The CEC has enormous investigative powers, making it a super-sleuth in forest matters. The MOEF has been in conflict with the court on certain matters such as the constitution of the forest advisory committee, but it is also the only other agency through which the court can implement its orders, and thereby has increased its role vis-à-vis state forest departments. And yet, many of the court's orders remain unimplemented or shabbily complied with. Working plans have been hurriedly prepared, but forest records still remain a mess.¹⁹ The capacity of the MOEF or state agencies to better execute the FCA has probably atrophied, as all their attention is diverted towards either circumventing or zealously anticipating the court's orders. And permissions for development projects such as mining and large dams are being granted under the FCA, while well-defined forest use rights to local forest-dwelling communities are being withheld.

Faulty Jurisprudence

The Godavarman case offers strong evidence to suggest that judicial overreach not only hurts the process of governance

by undermining the role of the executive, but also the content of governance by producing flawed judgments, i.e., interpretations of the law that are both unsound and impracticable. This happens for several reasons, including inadequate application of mind in the hurry to produce “landmark” judgments, and the impossibility of a central court knowing the complexities of conditions and laws across such a diverse country.

The problem starts with the expansion of the definition of forest. There is no doubt a lot of ambiguity in the FCA about whether it applies only to reserve forest. It is also true that there are many parcels of land in the country that are densely forested but by some quirk of the settlement process have been classified as revenue land, and that these lands have therefore evaded the FCA. But by the same token, many hundreds of thousands of hectares of legally notified forests, especially in the central Indian tribal belt, have been under continuous cultivation for several decades or more due to faulty settlement processes – an anomaly that the court simply did not recognise and that has finally led to the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Rights) Act 2006. In other words, rationalising the boundaries of “forests” will require notifying some revenue lands and de-notifying some forest lands whereas the court ordered that legally notified forests would continue to be under the purview of FCA.

Moreover, operating on the basis of physical status is eminently impracticable – what is required is a proper reinvestigation and resettlement of the boundaries. Additionally, drawing a sharp and simple distinction between forest and non-forest is counter-productive in a country that has enormously varied land use practices, including “fuzzy” land uses such as shifting cultivation.

The problem is compounded by the court’s misinterpretation of what constitutes “non-forest” purposes. All over the world, “forestry” includes logging. Sawmills are an essential component of such forestry. To equate sawmills with mining, as the December 1996 order does, is really extreme. There is nothing then to prevent basket weaving or ‘bhabbar’ (a kind of

grass) grass rope-making from also being declared as non-forest activities, and thereby requiring central approval. To further ban sawmills from being set up in a radius of 100 km from the Arunachal Pradesh state boundary – on any kind of land – is an astonishing interpretation of the mandate of the FCA.

One final example of poor jurisprudence is the court elevating working plans to a status that is neither tenable legally nor substantively. Nowhere in Indian forest law is there a requirement that working plans be approved centrally. The FCA is about regulating the conversion of forest to non-forest. Working plans are meant for management of forests as forests – whether for timber, firewood or wildlife. The FCA does not require central regulation of such management.

The whole idea that making a centrally-approved working plan will ensure conservation or sustainable use of the forest is highly questionable. Working plans are a legacy of colonial forestry, systematised ways of “working”, i.e., exploiting forests. Colonial and post-colonial forest departments did not manage forests for the purpose of either biodiversity conservation or local needs – forest management objectives that are now considered higher priority than commercial forestry, under the National Forest Policy 1988. The same policy also emphasised the idea of participatory forest management. It is a cruel irony that the court should deify the bureaucratic device of the working plan while the government is talking, however half-heartedly, of community-based micro-plans for forest management.

Backing Off

The Supreme Court has played an important role in increasing awareness about the sorry state of forest governance in the country. But it cannot – constitutionally or practically – manage India’s forests. It may be tempted to take on the tribal act, about which much misapprehension has already been created by the conservationist lobby. But it would have to tread very carefully, as this law attempts to redress a genuine anomaly in the settlement of forest boundaries in the country. The court should move towards closing down the Godavar-

man case and, if necessary, invoke the constitutional duty of the state (under section 48A) to prepare comprehensive legislation for a more decentralised, locally sensitive and sustainable use-oriented forest governance system.

NOTES

- 1 W P (Civil) No 202 of 1995, T N Godavarman Thirumulpad vs Union of India, Supreme Court of India; Down to Earth, ‘Interview between TN Godavarman Thirumulpad and Surendranath C’, August 31, 2002.
- 2 W P (Civil) No 171 of 1996, Environment Awareness Forum vs State of Jammu and Kashmir.
- 3 Based on Forest Case Update Oct 2007 (<http://www.forestcaseindia.org/f14/1ss%2039%20Oct%2007.pdf>).
- 4 *Down to Earth*, ‘Deep in the Woods’, January 15, 2003, at 1.
- 5 Eg, Ritwick Dutta and Bhupender Yadav, 2005, Supreme Court on Forest Conservation, Universal Law Publishing Co, Delhi.
- 6 T N Godavarman Thirumulpad vs Union of India (1996), 9 SCR 982.
- 7 See Dutta and Yadav, 2005, op cit for details.
- 8 Even critics of the court’s decision to ban felling in the north-east have recognised that tribal, clan and private forests were not always sustainably managed, although they have argued that much of this helped local peasants improve their conditions, send their children to college, etc. See Dev Nathan, 2000, ‘Timber in Meghalaya’, *Economic & Political Weekly*, January 22, 25(4): 182-86 and Tiplut Nongbri, 2001, ‘Timber Ban in North-East India: Effects on Livelihood and Gender’, *Economic & Political Weekly*, May 26, 36(21): 1893-1900.
- 9 Debarshi Dasgupta, 2007, ‘Lumberjack’s Law: Will an Effort to Define Forests Open Them up to Commercial Use?’ *Outlook*, December 17.
- 10 Dutta and Yadav, 2005, op cit, p xii.
- 11 For more details, see Armin Rosencranz, Edward Boenig and Brinda Dutta, 2007, ‘The Godavarman Case: The Indian Supreme Court’s Breach of Constitutional Boundaries in Managing India’s Forests’, *ELR News & Analysis*, 37: 10032-10042.
- 12 See *Forest Case Update*, Issue 38, September 2007 on www.forestcaseindia.org.
- 13 Vineet Narain vs UOI, 1998, SCC 226.
- 14 Bandhua Mukti Morcha vs UOI (1984), 3 SCC 161.
- 15 P Ramachandra Rao vs State of Karnataka, AIR 2002, SC 1856.
- 16 See Nathan, 2000 and Nongbri, 2001, supra note 8.
- 17 MoEF, Circular No 13-1/90-FP.
- 18 *Down to Earth*, ‘Deep in the Woods’, January 15, 2003.
- 19 Madhu Ramnath, 2002, ‘Meghalaya: Impact of ban on Timber Felling’, *Economic & Political Weekly*, November 30, 37(48): 4774-76.

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Situating the Individual within Climate Law

A Behavioural Law and Economics Approach to End-user
Emissions Trading



Suryapratim Roy

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Emissions Trading

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
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For Mum, Dad, Bigs



CONTENTS AT A GLANCE

LIST OF FIGURES.....	ix
ACKNOWLEDGMENTS	xi
Chapter 1 Contextualising Climate Behaviour: An Introduction.....	1
Chapter 2 Explaining End-user Emissions Trading: A Review	33
Chapter 3 Epistemological Reflections: A Testimonial Approach to BLE and Climate Regulation.....	69
Chapter 4 Public Responsiveness: An Experimental Study.....	107
Chapter 5 Political Choices regarding an EET.....	151
Chapter 6 EU Climate Regulation, Subsidiarity and EET	197
Chapter 7 Proportionality of an EET Scheme	245
Chapter 8 Conclusion	275
ANNEXURES	293
BIBLIOGRAPHY.....	319
APPENDICES.....	359
I. SUMMARY.....	361
II. SAMENVATTING.....	367



CONTENTS

<i>Acknowledgments</i>	<i>xi</i>
1: CONTEXTUALISING CLIMATE BEHAVIOUR: AN INTRODUCTION	1
I. Situating the Individual within Climate Regulation.....	5
A. Voluntary Action and its Discontents.....	6
B. Associative Incentives and Situated Motivation	9
C. Regulating Climate Behaviour: Transaction Costs and Distributional Concerns	13
II. Methodology and Axiology	19
III. Outline of the Book	25
A. Change in Outlook.....	25
B. Chapterisation and Contributions.....	29
2: EXPLAINING END-USER EMISSIONS TRADING: A REVIEW	33
I. Introduction	33
II. What is End-user Emissions Trading?	35
A. Personal Carbon Trading.....	35
B. Other proposed schemes	37
C. Towards an End-user Emissions Trading Scheme	38

ix

CONTENTS

III. Why do we need to investigate an End-user Emissions Trading Scheme?	40
A. Rationalising sustainable engagement.....	41
B. Regulating Offset Markets	43
C. Capping Uncapped Sectors.....	46
D. Energy Efficiency through the Backdoor?	50
IV. How is such a scheme to be designed?.....	52
A. Equity and Justice Considerations.....	52
B. The Issue of Integration.....	55
C. Choosing an Enforcement Mechanism	56
V. Legal framework.....	58
A. Defining different instruments.....	58
B. Voluntary markets and ex-post enforcement.....	60
VI. When could we see such a scheme being translated to policy?	61
A. Political acceptability	61
B. Public Acceptability	63
VII. Conclusion	66
3: EPISTEMOLOGICAL REFLECTIONS: A TESTIMONIAL APPROACH TO BLE AND CLIMATE REGULATION.....	69
I. Introduction	69
II. Testimony In Behavioural Law & Economics And Climate Change.....	71
A. Engaging with Different Disciplines.....	71
B. A Testimonial Approach to Legal Reasoning	81
III. Identifying Moderators And Mediators As Tools of Reductionism.....	92
A. Law as Mediation.....	92
B. Legal Justification as Moderated Mediation.....	94
C. Moderated Mediation of Climate Law	98
IV. Conclusion	104

4: PUBLIC RESPONSIVENESS: AN EXPERIMENTAL STUDY.....	107
I. Conceptualising ‘Contextual Public Acceptability’ And ‘Public Responsiveness’	107
A. The Current Conceptual Framework.....	107
B. Contextualising Public Acceptability	109
C. Public Responsiveness	112
II. The Experimental Turn	115
A. The Role of Incentives and Loss Aversion.....	121
B. Motivation behind the Particular Study Conducted	123
iii. The Experiment: Description, Analysis And Inferences.....	125
A. Introducing the Experiment.....	125
B. Conducting the Experiment	126
C. Analysing the Experiment.....	127
D. Drawing Inferences	133
iv. Conclusion	150
5: POLITICAL CHOICES REGARDING AN EET	151
I. Gauging Political Acceptability through Stated Preferences of Regulators.....	152
II. The Idea of Surveying Regulators And Experts, And The Pilot Study	155
A. Conducting the Pilot Study	156
B. Responses to the Pilot Study	160
III. The Survey	162
IV Gauging Political Choices by analysing the political economy of regulation.....	165
A. Why the Political Economy of the EU ETS may be Relevant	167
B. Political Economy Concerns of Other Potential Climate Measures	173
C. ‘Hard-wired’ Biases in Public Reason: BLE and Political Economy of EET.....	177

CONTENTS

V. Conclusion	194
6: EU CLIMATE REGULATION, SUBSIDIARITY AND EET	197
I. The EU Climate Regulation Complex.....	198
A. The Constraining and Facilitative Role of EU Regulation	198
B. The Distributive Role of EU Regulation.....	200
II. The Legal Basis for EU and Member State Climate Policy	207
A. EU Primary Law on Climate Change	208
B. EU Secondary Law on Climate Change	211
III. Subsidiarity and the EET	222
A. The Prevalence of the EU in Competence Allocation	223
B. Regulating the End-user: Double-Counting, the Polluter Pays Principle and the Least Cost Avoider	234
III. Conclusion.....	242
7: PROPORTIONALITY OF AN EET SCHEME	245
I. Conceptualising Proportionality in relation to EU Climate Regulation	247
A. Introducing Proportionality	247
B. Proportionality as a Tool of Reasoning about EU Climate Regulation.....	249
II. Proportionality and EET	254
A. Legitimacy of Climate Regulation.....	254
B. Necessity and Suitability of EET	257
III. Conclusion.....	272
8: CONCLUSION	275
I. Revisiting Assumptions	276
II. scope for further research and recent scholarship.....	281
III. Parting thoughts.....	287

CONTENTS

ANNEXURES	293
I. Annexure i: Experiment	293
II. Annexure ii: Survey.....	297
<i>Bibliography</i>	319
<i>Appendices</i>	359
<i>English Summary</i>	361
<i>Nederlandse Samenvatting</i>	367



ACKNOWLEDGMENTS

The story goes that when Martin Luther appeared before Charles the Fifth to defend his writings, he famously said, ‘Here I stand, I can do no other, so help me God.’ This declaration is an interpreter’s playhouse. Did he mean that his free will would not allow him to do otherwise, and he seeks God’s forgiveness? Or did he mean that he has no free will, is merely carrying out God’s command, and turns to the heavens for validation? If I may be forgiven an irreverent thought, it may also mean that he didn’t have the breadth of mind to think or write anything else. There could be yet another interpretation – in 1521 Luther channelled public reason; it wasn’t him that spoke, but the voice of the times (and the invisible institutions that constituted this voice) in favour of political change – he could indeed ‘do no other.’ The individual is a strange beast, so is speaking to power, and so are the forces that shape thoughts and actions. To enter the interpretative inclination of legal inquiry, the troubled relationship between thought and action in the psychological laboratory, the prevalence of institutions in political economy scholarship, and remain certain about the categories used to make sense of a finite world is wishful thinking. It is also in this uncertain interpretative space that I find some solace; though there is a temptation to put words in their proper place and keep them there, the possibility to reconstruct and understand them anew is why I think the university exists.

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To return to the fourth interpretation of Luther's statement and the informants of voice, all my reading and underlining would be useless without institutional support. The University of Groningen funded my PhD, which allowed me to travel in Europe and meet people. Notably, my supervisors – Edwin Woerdman and Oscar Couwenberg – took a chance on me. A big thank you and a word of apology to them: their patience and forbearance with me has been monumental. Despite our intellectual differences, they have been the most supportive and caring mentors. The person who changed my world completely is Dimitry Kochenov. Recognising his ability to search for equality and try to shape the law around it has been the most profound intellectual event of my life. I have seen in his work and engagement the rare quality of being simultaneously discerning and empathetic. Martha Roggenkamp, Marcel Brus and Yongjun Zhao have given me opportunities during my PhD that allowed my career to kick-off. Jan Willem Bolderdijk took out several hours of his time to give me a clear snapshot of laboratory life. Daniela Crisan at the Faculty of Behavioural and Social Sciences most kindly reviewed the data analysis of the experiment conducted. The Law & Economics team – Charis Van den Berg, Anneke Heins, Thijs Jong, Fitsum Tiche, Teo Tuinstra, Yingying Zeng, Stefan Weishaar – made it bearable to go in to work despite emotional and intellectual struggles. So did Jeanne Mifsud Bonnici, Adam McCann, Zeeshan Mansoor, Eleonora Gojlan, Marlies Hesselman, Antenor Hallo de Wolf, Amaranta Luna, Hannah Müller, Lorenzo Squintani, Leonie Venhoeven, Andrej Zwitter. Despite his many responsibilities, Laurence Gormley would often inquire about my progress and provide sound advice.

xvi

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I am aware that the Acknowledgments section is supposed to be a feel-good ritual, but since I'm on the subject of institutional informants, I wish to say something plainly. There are people in the academia who thwart scholarship as well; who refuse to consider ways of inquiry outside their tunnel vision. Sometimes they rhetorically claim to be interdisciplinary while simply maintaining a particular (usually stagnant) worldview. Thankfully, I have met genuinely inquisitive scholars; who try to promote rather than destroy thought; such as Maurice Adams, Marja Bartl, Uladzislau Belavusau, Ugo Mattei, Lien Pham, Giulia Mennillo. It is for similar reasons I respect the members of my Examining Committee – Alberto Alemanno, Aurelia Colombi-Ciacchi and Fernanda Nicola – to have meaningfully engaged with my dissertation and taken my work seriously. It should also be mentioned that the last leg of the editing and revising process would not have been possible were it not for the support of my colleagues at Trinity College Dublin, primarily Oran Doyle and Andrea Mulligan.

Though there may be doubts about the role of free will in Luther's statement, I have no illusions about my props. I am what I lean on. Amita Dhanda, Kalpana Kannabiran and V.K. Unni taught me the value of intellectual rigour and open inquiry during my undergraduate years. Maja Djundeva, Marlenny Guevara, Annika Hoogeveen, Rohan Kaul, Esteban Guevara López, Aisling McNiffe, Mauricio Muñoz Arias, Primoz Pirih, Raghav Shankar, Liubov Yakovlieva, Elisabeth Zhang; I am grateful for their kindness and friendship. Fitsum and Maja took on the burden of being paranymphs despite their substantial teaching and research commitments Swethaa Ballakrishnen, Arunabha Deb and Shreevatsa Nevatia (in alphabetical order) are my world. I do not know what I would do or where I would be without them. Finally, Mum, Dad, Bigs, I'm sorry for leaving. I hope to make it up to you some day.

Suryapratim Roy
Dublin, August 4, 2017



1

CONTEXTUALISING CLIMATE BEHAVIOUR: AN INTRODUCTION

The need for enhanced action to deal with climate change in the European Union (EU) and its Member States was in the air when I started writing this book. While writing it, developments such as higher aspirational targets agreed to by signatories to the United Nations Framework Convention for Climate Change (UNFCCC) by way of the Paris Agreement,¹ and judgments such as *Urgenda v. The Netherlands*² where the Hague District Court required the Dutch government to adopt and implement higher targets, formalised this impetus. The important question is how the desire to take more climate action could be put into effect while balancing different interests. One of the options in this regard is to include households, and effecting a change in the ‘dirty’ activities of individuals. A proposal that had been mooted sometime back – and is an ongoing research project in some parts of the world – is

¹ Decision of the Conference of Parties to the United Nations Framework Convention on Climate Change to adopt the Paris Agreement. UNFCCC, Decision 1/CP.21, Adoption of the Paris Agreement, FCCC/CP/2015/10/Add.1 (2015).

² *Stichting Urgenda v Government of the Netherlands (Ministry of Infrastructure and Environment)*, ECLI:NL:RBDHA:2015:7145, Rechtbank Den Haag, C/09/456689/HA ZA 13–1396 (Urgenda), English translation available at <http://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2015:7196>

to involve individuals in an incentive-based carbon trading scheme.³ The centrality of individuals in a proposed regulatory innovation brought to mind another fairly recent development – the emergence of Behavioural Law and Economics (BLE) as a dominant way of analysing regulatory choices.⁴ BLE, therefore, seemed to easily lend itself to analysing the feasibility of a carbon trading scheme for individuals, or a collection of individuals in a household unit. It is this line of inquiry that was initially pursued in writing this book. It was hoped that such an inquiry would provide insight into how a carbon trading scheme for households could be implemented successfully by understanding how to engage individuals better. However, the book took a very different turn once I started to examine the foundations of such a regulatory scheme, as well as the BLE lenses through which the scheme was examined. Rather than find evidence to implement a feasible carbon trading scheme for individuals, the focus shifted onto how an individual may be thought about with respect to climate regulation. To a great extent, what brought about this shift was interrogating the BLE lenses themselves that were used to view such regulation. Further, given the uneasy relationship between opinion and behaviour, and the importance of respecting both, I have tried to maintain a deliberative hold on how opinion and behaviour on climate change is situated;⁵ an exercise that kicks off in the paragraphs below.

³ For a collection, see Yael Parag and Tina Fawcett (eds.), *Personal Carbon Trading* (Oxford: Earthscan Climate Policy Series 2010).

⁴ The articles that were critical in defining the field are Cass Sunstein and Richard Thaler, 'Libertarian Paternalism Is Not an Oxymoron' (2003) 70 *University of Chicago Law Review* 1159; Christine Jolls, Cass Sunstein and Richard Thaler, 'A Behavioral Approach to Law and Economics' (1998) 50 *Stanford Law Review* 1471. The proliferation of BLE into regulatory decision-making is a relatively recent phenomenon, with the establishment of dedicated departments as well as the reliance on BLE for decision-making. Suryapratim Roy, 'Behavioural Axiology and Public Reason', Paper presented at Law and Society Association Annual Conference, Mexico, 2017.

⁵ This is admittedly a marked departure from the position of the detached observer prevalent in legal and social science scholarship, and one which I too adopt frequently. For this book, I was motivated to use a deliberative-narration approach as I felt the need to clearly keep a finger on the process of identifying and translating the scientific into the normative; something that demands a deliberative approach. See for instance, Ole Pedersen, 'The Limits of Interdisciplinarity and the Practice of Environmental Law Scholarship' (2014) 26 *Journal of Environmental Law* 423. I have been inspired in my approach by Miranda Fricker who

If I were asked whether climate change features in my list of priorities, I would say no. If I were asked to provide reasons for it, I would come up with arguments such as free-riding, and that I (and the world) have greater problems to handle. In fact, I might go a step further and suggest that a concentration on climate change is an excuse to ignore immediate injustices that I must deal with every day. If the hypothetical interrogator was zealous and asked whether I care about food prices, displaced refugees, grandchildren, and storms, I would probably still say no, but would be forced to reason differently. At this point, behavioural (now almost folk)⁶ psychology would indicate that the way questions are asked and the requirement to provide reasons might shape my answers. Further, the person (or organisation or party) that asks me such questions may affect the way I answer. Oddly, stepping out of the shoes of a citizen-respondent and putting on my professional shoes would reveal that I have been dealing with climate change issues in different capacities for most of my working life. I will try and say the reason behind this is that I find it interesting from different scholarly perspectives, but psychologists might argue that I'm bluffing to myself – I work on climate change issues only to feel involved and assuage my guilt. None of this makes me any wiser but mires me in doubt about my convictions and feelings towards climate change. There are clearly complications in the causal relationship between my preferences and my behaviour; and an argument could be made for considering behaviour *sans* opinion in relation to climate action. Having said that, surely what I think and feel should have some value. At the same time, I am aware that it is not possible for me to know all there is to know, and even if I did, I am not

moves away from the traditional philosophical practice of providing a genealogical account of blame, and 'imagines her way' into a paradigmatic 'portrait of the practice of blame.' This allows her to arrive at a conception of 'Communicative Blame' that is not restricted to whether blame is good or bad, but one that serves an instrumental function of increasing 'the alignment of the blamer and the wrongdoer's moral understandings.' Miranda Fricker, 'What's the Point of Blame? A Paradigm Based Explanation' (2014) 9 *NOÛS* 1. Similarly, I try to imagine my way into how climate behaviour and responsibility may be situated, and factors that inform such behaviour.

⁶ The translation of academic psychology into folk psychology is not an obvious process. See Martin Kusch, *Psychological Knowledge: A social history and philosophy* (London: Routledge, 1999), pp. 202 – 270. There is no social history of BLE yet; for a preliminary attempt. see Roy, 'Behavioural Axiology and Public Reason', *supra*.

an island. Whether I like it or not, my thoughts and actions operate within bodies of knowledge and political negotiation that I must learn to trust or contest.

The body of knowledge that I must trust largely because neither I nor most people in the world have any way of knowing better is the science of climate change. But *what* science and *by whom*? Judges in different jurisdictions have faced a similar question,⁷ and the reasoning has been to defer to the epistemic authority of a small group of scientists who know what's going on. In *Urgenda*, The Hague District Court relied on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report.⁸ The scientific authority of the IPCC was not challenged by the parties to the dispute. The IPCC, backed by a sizable majority of scientists is convinced of hazardous climate change, the disruption of natural cycles due to human contribution, and of the need to respond quickly.⁹ But this is where my trust in secondary literature ends. There is a problem, yes. And there is a human contribution. What to do with this problem and how I choose to look at the human contribution are issues that do not flow from the expertise of climate scientists. Let us take the IPCC Report and its discussion in *Urgenda*. The Report states that Annex 1 countries should reduce their carbon emissions by the recommended target of 25–40 per cent reductions by the end of the decade.¹⁰ It is not clear whether the target of 25–40 per cent is for individual countries, or for Annex 1 countries as a group. Thus, the question as to whether the Netherlands is an appropriate unit for unilateral 25-40 percent reductions – as the Court in *Urgenda* felt – is a matter of interpretation. This interpretation is just the tip of the iceberg.

⁷ *New Zealand Climate Science Education Trust v National Institute of Water and Atmospheric Research Limited* [2012] NZHC 2297 (7 September 2012); *Stuart Dimmock v. Secretary of State for Education and Skills*, [2007] EWHC 2288.

⁸ *Urgenda*, para 2.15.

⁹ William Anderegg et. Al., Expert Credibility in Climate Change, *PNAS* 2010 : 1003187107v1-201003187, June 2010. Available at: <http://www.pnas.org/content/early/2010/06/04/1003187107.full.pdf+html> [Accessed: August 5, 2010]

¹⁰ Sujata Gupta, Dennis A. Tirpak and others, 'Policies, Instruments and Co-operative Arrangements' in *Climate Change 2007: Mitigation of Climate Change, IPCC Fourth Assessment Report*, p. 776. Available at: www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4-wg3-chapter13.pdf.

The entire idea of Annex 1 countries or even the recognition of countries as the units under consideration or the choice of 25 – 40 percent reductions are all interpretative choices. This chain of interpretation arguably comes down to the role of the individual in responding to climate change. While there is consensus on the science of climate change, there is no corresponding agreement on how to respond to climate change. Mike Hulme, a distinguished geologist and founder of the Tyndall Centre of Climate Change Research, puts it bluntly when he says there is no economic and scientific consensus about dealing with climate change¹¹, thus rendering responses susceptible to being shaped by popular media¹² and social ties.¹³ If I'm asked whether I make efforts to change my behaviour to respond to climate change, I will sincerely wonder in addition to the obvious *why me* and *will it make a difference*, other mysteries, primarily *who decides the relevance of what behaviour, compared to whom*, and *will such change take a lot of effort and skill if I want to do it properly?* And this does not even cover what I might wonder if I were to step in the shoes of a policy-maker, or a judge. Then would my opinion –or the opinion of people in general– matter at all?

In the introduction to this book, I attempt to situate the individual within climate regulation. My intention with this narrative exercise is to provide a contextual framework that informs the more specific issues explored. Secondly, I describe the BLE lenses that I utilise to describe the subject. Following this, I provide an outline of the book.

I. SITUATING THE INDIVIDUAL WITHIN CLIMATE REGULATION

Whether an individual considers or responds to the phenomenon of climate change, the assumption is that she is capable of independent deliberation and behaving as she deems fit. My endeavour in this section is to show why this

¹¹ Mike Hulme, *Why We Disagree About Climate Change: Understanding Controversy, Inaction and Opportunity*, Cambridge: Cambridge University Press (2009)

¹² Ibid, pp. 211-247

¹³ Ibid, pp. 1-35

may not be the case, and how we might contextualise the individual or the household within the context of climate change.

A. Voluntary Action and its Discontents

In the documentary film *No Impact Man*,¹⁴ Colin Beavan, a middle-income writer residing in Manhattan convinces his wife and two year-old daughter to undertake an experiment (commissioned on tape and print) to become carbon-free, or change their lifestyle in a manner that has no impact on the climate. This endeavour starts slowly, with buying organic locally grown food, biking rather than driving, to removing the television, electricity, elevators and public transport. Along the way, the film captures the substantial emotional turmoil and in-family conflicts undergone by the members, primarily the wife and the son. The project was undertaken for a year, after which the family transitioned to a more moderate lifestyle. The website of the film's protagonist, Colin Beavan, declares that he "*was named one of MSN's Ten Most Influential Men of 2007...and [he] sits on the board of directors of New York City's Transportation Alternatives and on the advisory council of Just Food.*"¹⁵ When I watched this film, I felt quite disconcerted. I reasoned that perhaps it is because responding to climate change does not feature on my list of priorities¹⁶ that I was somewhat guilt-tripping; but I had strongly felt that perhaps the son and the wife were unwarrantedly subjected to one person's project. Even if it isn't my priority, I wondered whether it is fine to assume that everyone has time, energy, a professional cameraman and a book deal to become carbon-neutral. Further, I found it inconsistent that while the Beavan residence would not be allowed electricity and the subway was a no-go, day-care centres for the kid and Mr. Beavan's office would have electricity. I think I now have the words to retrospectively reconstruct my issue with

¹⁴ *No Impact Man: The Documentary* (Eden Wurmfeld and Laura Gabbert Productions 2009),

¹⁵ <http://noimpactman.typepad.com/blog/about-colin-beavan.html>

¹⁶ There was jumble of second guesses that bothered me retrospectively: why did I watch the documentary if I don't care about climate change (instead of cat videos on YouTube for example)? Am I just upset I don't have the energy and the time to be Colin Beavan? Was this another instance of the disconnect between opinion and behaviour? The relationship between opinions, preferences and behaviour is explored in Chapters 4 and 5.

the film: the household's engagement with climate change was *mediated* by Beavan's private desire¹⁷ to write a book and make a documentary film about it. Climate-friendly behaviour was informed by the camera, intra-household hierarchy and privately processed information regarding appropriate responses to climate change. What was missing is whether this camera-friendly episode had a desirable impact on emissions reduction; the viewers were certainly not privy to (i) the *validity of the information* on which Beavan's choices were made, (ii) the *effectiveness of changes in behaviour over time and space* beyond the experiment given that the period chosen was a camera-friendly period of one year with a single family as protagonists, and (iii) *whether such behavioural changes were warranted* at all, given the theoretical and collective-action complexities¹⁸ of climate responsiveness behaviour, and the other difficulties of everyday life that people have to deal with. If installing smart-meters inside homes seem intrusive,¹⁹ then should people be required to imitate Mr. Beavan? Importantly, it is doubtful whether Mr. Beavan's private actions should be encouraged at all: there is a possibility that Beavan's family might go on an emissions binge to recover from the one-year-trauma, or even unintentionally emit more than usual in their no-impact state.²⁰ Should the solution therefore

¹⁷ I confess that I was socialised into social psychological literature on the self-concept, where acting environmentally friendly sends a self-signal that the actor is a good person. Economic theory identifies this as the 'warm glow' benefit. In a recent study, Taufik, Bolderdijk and Steg have shown that this could lead to a literal warm glow; i.e. those acting in an environmentally friendly fashion may perceive the temperature to be higher. Danny Taufik, Jan Willem Bolderdijk and Linda Steg, 'Acting Green Elicits a Literal Warm Glow' (2015) 5 *Nature: Climate Change* 37. If this is extended to a collective, then the desire to be a good person may be imposed; intra-family decisions are discussed later in this chapter.

¹⁸ In his voluminous treatise, Gardiner identifies the tragedy of the commons, inter-generational equity and theoretical conflicts as the central issues of climate change. Stephen M. Gardiner, *A Perfect Moral Storm: The ethical tragedy of climate change* (Oxford: Oxford University Press, 2011), pp. 6-7.

¹⁹ See Colette Cuijpers and Bert-Jaap Koops, 'Smart Metering and Privacy in Europe: Lessons from the Dutch Case' in Serge Gutwirth et. al. (eds) *European Data Protection: Coming of Age* (Maastricht: Springer 2013), pp. 269-293.

²⁰ Unintentional maladaptive and malmitigative practices are quite common even with considerable informational sophistication. See, for instance, Lesley K. Mcallister, 'Adaptive Mitigation in the Electric Power Sector' (2011) 6 *Brigham Young University Law Review* 2115.

be to discourage people like Mr. Beavan from imposing his vanity on his family and the ozone layer, for fear of it being misdirected?

It may appear that if Mr. Beavan had perfect information, then he would be able to privately negotiate the other issues of effectiveness and desirability. But information by itself is not enough. Take for instance greywater re-use, or eating organic food. Recycling of waste water seems like an admirable activity, if only we found the motivation to do it. However, it has been found that greywater re-use has the potential to have a deleterious effect on the climate, alter soil properties, damage plants and contaminate groundwater.²¹ The solution offered in some legal systems has been to amend plumbing codes and issue licenses permitting households to engage in greywater use, once the possible impacts have been assessed.²² Such detailed regulation may be impractical, but it also reveals the need for more than mere information. Let us consider organic farming. Although there appears to be evidence that organic farming has the potential to drastically cut emissions,²³ currently the ‘cradle-to-farmgate’ emissions are higher for some organically farming techniques than others; and the emissions from converting conventional farming systems to organic farming systems are substantial.²⁴ Thus it appears that what is needed is expensive and comprehensive regulation rather than informational guides to facilitate effective individual engagement with climate change. But surely anyone who has glanced at any material in Law & Economics (L&E) would know that expensive and enhanced regulation is not always a good thing.²⁵ What then? I want to come back to Mr. Beavan’s camera and book deal.

²¹ Michael Snodgrass, ‘Greywater-the Reuse of Household Water: A Small Step Towards Sustainability and Climate Change’ (2010) 22 *Georgetown Environmental Law Review* 591.

²² Ibid.

²³ Rodale Institute, *Regenerative Organic Agriculture and Climate Change*, 2014.

²⁴ Kumar Venkat, ‘Comparison of Twelve Organic and Conventional Farming Systems: A Life Cycle Greenhouse Gas Emissions Perspective’ (2012) 36 *Journal of Sustainable Agriculture* 620.

²⁵ We will discuss the works of Ronald Coase and Guido Calabresi – the pioneers of L&E – in the course of this book. For an overview of the field, see Daniel Cole and Peter Grossman, *Principles of Law and Economics* (New York: Aspen, 2nd edition, 2011).

B. Associative Incentives and Situated Motivation

Irrespective of whether we like Mr. Beavan's experiment, we cannot take away two simple facts: the first is that Mr. Beavan was a writer in search of a new project; he had discussions about *No Impact Man* with his agent, and he added to a budding industry of popular eco-austerity literature.²⁶ During the experiment, there was a camera hovering over the household chronicling the process that had the potential to turn into a successful film. In the language of economics, the camera and the book deal appear to behave as external incentives. In the language of psychology, it could have been internal motivation that pushed the Beavan family: they were predisposed towards doing something for the planet.²⁷ Adopting a sociological slant might tell us Mr. Beavan belongs to a certain class of people for whom such actions are relationally important, this wouldn't have happened if he did not have the cultural capital of being a popular writer or the social capital of enjoying a contemporary middle-class New York lifestyle.²⁸ All of these speculations may be correct, and sophisticated investigation of their influence and predictability may possibly be difficult to reconcile.²⁹ What cannot be ignored, however, is the fact of the book deal and camera.³⁰ Thus external interventions are a good place to begin. The way in which they work to influence and result in (desirable

²⁶ For a critical but detailed account of the experiment, see Elizabeth Kolbert, 'Green Like Me', *The New Yorker*, August 31, 2009.

²⁷ There could well be a 'motivation crowding-out' by an external incentive. Bruno S. Frey and Felix Oberholzer-Gee, 'The Cost of Price Incentives: An empirical analysis of motivation crowding-out' (1997) 87:4 *American Economic Review* 746.

²⁸ It is important to distinguish the study of such relational factors from how such factors are translated into and perceived as individual motives and desires. For a recent and extensive account of how situational factors need to be studied in their own right, see Mark Granovetter, *Economy and Society: Framework and principles* (Harvard MA: Harvard University Press, 2017).

²⁹ The idea that different perspectives on a situation may be irreconcilable is discussed in Section IIIA, Chapter 2.

³⁰ Even commentators who have been supportive of *No Impact Man* do not discount the importance of the camera; DeLaure makes the observation that recording and communicating the tragic-comic private battles with climate change makes the issue visible and intelligible to a large number of people. Marilyn DeLaure, 'Environmental Comedy: No Impact Man and the Performance of Green Identity' (2011) 5:4 *Environmental Communication* 447.

or undesirable) climate behaviour can depend on myriad contextual concerns, predispositions, and the nature of the incentive itself, such as the sweetness of the book deal, or the potential audience reach of the documentary film. Thus, the nature of the incentive or the nature of prior internal motivation or the nature of situational factors may play different weighted roles, but their engagement in relation to climate behaviour is brought about by *association*. The word ‘association’ is in currency among scholars working in Science and Technology Studies (STS). Simply put, material objects, people, knowledge assume a life of their own when they meet a mediator, and all the components (including the mediator) have the potential to be redefined or altered.³¹ The idea of association is central to Daniel Kahneman’s – the father of behavioural economics – *oeuvre* as well: external stimuli set off chains of associative intuitive and unconscious reactions; their interconnectedness creates an ‘associative coherence’.³² The economic term ‘incentive’ is insufficient to capture this phenomenon as both preferences as well as the desired outcome are altered by such factors. What may seem like a rational decision could be in effect a mobilisation of associated ‘impressions, intuitions, and response tendencies.’³³ In the case of the Beavan family, it could be said that the camera influenced the choice of carbon-friendly activities (fossil fuels consumed in spaces beyond the line of sight are fine), the people involved in the activities (naturally only the Beavan family was in the spotlight) and the duration of the experiment (it was terminated after one year). Thus, filming and recording could have been the incentive, but it assumed the role of an influential mediator. The effects of such a mediator in spurring ‘voluntary action’ that is desirable for the public good is questionable.³⁴ Consider another example.

³¹ For an introduction, see Ulrike Felt, Rayvon Fouché, Clark A. Miller and Laurel Smith-Doerr, *The Handbook of Science and Technology Studies* (Cambridge MA: MIT Press, 4th ed, 2016).

³² Carey K. Morewedge and Daniel Kahneman, ‘Associative Processes in Intuitive Judgement’ (2010) 14 *Trends in Cognitive Sciences* 435.

³³ *Ibid*, p. 439.

³⁴ Other writers who conduct similar experiments in reducing their carbon footprint are humbler about the social effects of their voluntary actions. James Mckinnon who spent a year trying to eat food produced within a hundred miles of the apartment observes “I am

Recently, there has been a kind move at the University of Groningen to partially subsidise the purchase of electronic tablets by its employees to move to a paperless world.³⁵ I didn't take advantage of this opportunity because I'm too used to paper; or to put it in economic language, my switching costs are too high. It would probably do me a lot of good, help me organise my articles (my office is a mess), and enable mobility (travelling for conferences is still a horror; deciding on which papers to carry is no easy task). Enabling mobility and organisation—and thereby enhancing professionalism—could be considered as positive externalities of a policy that seeks to promote going paperless as an objective. However, I cannot possibly imagine the prospect of not being able to scribble on margins; I don't think there would be any point to life. I'm thankfully supported in this indulgence by Tim Parks who demonstrates that his students started reading texts far more closely when they used pen and paper,³⁶ thus arguing that pen and paper have a comparative professional benefit, at least for studying literature and translation. The same, obviously, cannot be said for some of my colleagues who work primarily with software; their situated professional preferences may be different. I don't think I mind too much, however, by the policy move in several EU Member States for having paperless tickets for public transport, as the inconveniences are quite minor. Switching to paperless tickets is not a problem-free process though—it requires some diligence to check-out one's travel pass while getting off buses and trains,³⁷ it enhances costs for some destinations (while reducing it in others), and if you are visiting a Member State temporarily, then you would need to buy a new pass (countries differ about ease of availability and costs of acquiring a pass). The paper tickets are gradually phased out and discontinued; thus adopting a more command-and-control rather than incentive-based regulation. In any event, there is an attempt to foster a default

not deluded enough to feel that I'm *making a difference* or *being the change I want to see in the world.*" Quoted in Kolbert, *supra* n. 22.

³⁵ The Policy can be found at: https://docs.google.com/file/d/1O6ax_71kdYQdFncQGiawKDv7IYB-VuIAPTxFIL2DIIBXvDUwhxgmZOISUU5y/edit

³⁶ Tim Parks, "A Weapon for Readers", *The New York Review of Books*, December 3, 2014.

³⁷ I forgot to do so the first few times, and lost a fair bit of money, as the amount for the entire route is automatically deducted. I wondered if an adjustment period, or a 'delayed response' was in order for the switch to a travel pass.

culture – or steps towards developing a social norm – of paperless tickets. I think I'm quite indifferent to the fostering of this social norm; when I travel to other countries within the EU, I expect to use my credit card to purchase a top-up travel card without much inconvenience.

Unlike paperless transport, I doubt very much if I'd be happy with a social norm of paperless reading. The distinction between my fear of going academically paperless and indifference towards paperless transport regarding the desired goal of reducing paper could be captured in the Sunstein-Reisch framework of a *default rule*, where I would have the choice to use paper if I consciously object to paperlessness.³⁸ They demonstrate that switching the default print option in university computers to double-sided printing has led to a tremendous reduction in the use of paper. But I could not help but wonder: but isn't that an infringement of my privacy? Also, what would the paper industry have to say (especially the smaller companies and suppliers that do not have the economies of scale)? And is it possible that, though it might not take too much effort to switch to a tablet, it would have an unanticipated harmful effect of reducing peoples' productivity? From the importance I attribute to pen-and-paper, I want to suggest that 'pen-and-paper' is not just a tool for communicating thoughts, but a path-dependent technology³⁹ that mediates one's thoughts and actions by association. Paper, much like the steam engine, or Microsoft Word or the QWERTY keyboard, has a social and economic history;⁴⁰ has close ties to the publishing industry that influences its path-dependence in individual attachment. From this, I infer that my love of 'pen and paper' is not an expression of a free world; there are undoubtedly forces that shape my preferences, even if I have internalised

³⁸ Cass R. Sunstein and Lucia A. Reisch, 'Automatically Green: Behavioral Economics and Environmental Protection' (2014) 38 *Harvard Environmental Law Review* 127.

³⁹ The identification of pen and paper as a technology is found in Joseph Pitt, 'The Autonomy of Technology' in Craig Hanks ed. *Technology and Values: Essential Readings* (Blackwell Publishing, 2010), p. 95. For the foundations of path-dependence generally, see Brian W. Arthur, 'Competing Technologies and Lock-in by Historical Small Events' (1989) 99 *Economic Journal* 116 and Paul A. David, 'Clio and the Economics of QWERTY' (1985) 75 *American Economic Review* 332.

⁴⁰ For a recent account, see Lothar Müller, *White Magic: The age of paper* (New York: Polity Press, 2014).

these forces and they now seem natural. I also infer that it is fine for me to prefer ‘pen and paper’ as the goal of paperlessness competes with other concerns such as productivity. In this case I think I would prefer to pay a bit more for paper in case there’s a university rationing of paper to meet a paper tax. Further, if the need to cut down on paper is high and I might pose an obstacle to this, I would prefer if my path-dependence is manipulated than deliberately engaging in motivating myself to cut down. I also think that given my strong internalised inclination to use pen-and-paper, my reasoning about social costs and benefits would be biased. In other words, if it is necessary, I would be happier to sacrifice my deliberative freedom in exchange for not bearing the burden of switching costs. This way of reasoning is akin to Joseph Raz’s Normal Justification Thesis: Law is the mediator that people employ to achieve the ends that they have reason to value. Once such employment is put into effect, then per the Pre-emption Thesis, people sacrifice some means to achieve such ends in favour of legal institutions.⁴¹

The term ‘incentive’ in economics is normally considered in monetary terms, and something that is provided by an external party. On the other hand, the term ‘motivation’ in psychology intuitively seems to be something ‘internal’. In this section, I have tried to introduce the idea that the effects of incentives may be best understood by *association*, rather than something that is given. Similarly, motivation is not limited to an internal facet of an individual, but something that is *situated*. This approach will help us in considering questions of public responsiveness and political acceptance later in the book.

C. Regulating Climate Behaviour: Transaction Costs and Distributional Concerns

Mr. Beavan’s actions seems to be as voluntary as driving an SUV, but unlike driving a dirty car, they seem morally commendable, as he is doing something

⁴¹ Joseph Raz, *Authority* (Oxford: OUP, 1990), pp. 115 – 141. This thesis would appear to have desirable applicability for climate change issues, if we were to agree with George Marshall’s analysis on how individuals left to their own perform actions that are detrimental to climate change, even if some of their actions motivated by ‘warm glow’ or temporary dividends indicate otherwise. George Marshall, *Don’t Even Think About It: Why our brains are wired to ignore climate change* (New York: Bloomsbury, 2014).

good. It seems that his actions are not regulated, and if everyone voluntarily did what Mr. Beavan is doing (over a longer period and with an eye on effectiveness) then things would work out. There would be no need for law. There would be no need for any intervention. As the reader would have guessed from the above discussion on the discontents on voluntary action and situated motivation, I do not think there is any such thing as a voluntary preference about a social phenomenon that can be explained in individualist terms.⁴² This does not necessarily mean that the preference needs to be overruled; it also does not necessarily mean that there is need for an externally imposed responsibility to change. Drawing on these two lines of thought, it seems clear that law shapes behaviour through regulation, but not necessarily through the imposition of liability. Given the inevitable influence on preferences by myriad factors, there seems to be a justification for some intervention. Such intervention to shape behaviour does not necessarily need to be constraining, but could also be facilitative.⁴³ Allow me to turn to the history of fossil fuels to provide some nuance to this suggestion.

Though fossil-fuel based practices and activities now seem natural and part of everyone's lives in many ways, it is important to remember that such practices are quite recent. Till the 19th century, renewable sources provided most of the world's energy,⁴⁴ and it was only in the twentieth century that

⁴² This is the philosophical issue Sunstein had grappled with earlier, and its influence is very clear in his scholarship on Behavioural Law and Economics. See Cass Sunstein, 'Preferences and Politics' (1991) 20 *Philosophy & Public Affairs* 3, pp. 5 – 6. Initially Sunstein was working with Amartya Sen's notion of an 'adapted preference' that some preferences may be considered spurious if they are bred in unjust conditions. However, he subsequently adopted the psychological insight that all preferences are inevitably circumscribed. For a discussion, see Suryapratim Roy, 'Agency as Responsiveness', European University Institute Working Paper Law 2016/04.

⁴³ This idea is a core premise of modern analytic jurisprudence; in moving away from John Austin's notion of coercion as the primary interest of law, H.L.A. Hart emphasised the importance of law's social function of 'providing individuals with facilities for realising their wishes' in addition to getting people to do or avoid doing things 'irrespective of their wishes'. H.L.A. Hart, *The Concept of Law* (Clarendon Press: Oxford, 1961), p. 27.

⁴⁴ There was a prevalence of water-powered industrial activity, to be displaced by the promise of mobility and investment-shopping that the steam engine afforded. See Andreas Malm, 'The Origins of Fossil Capital: From water to steam in the British cotton industry' (2013) 21 *Historical Materialism* 15.

concentrated hydrocarbon stores were exploited, beginning with England. Coal brought into play spatial changes, provided the incentive to develop the steam engine to facilitate coal mining, the first labour unions, the search for a fuel that flowed through networks that had lesser threats of blockages and lower costs of manpower.⁴⁵ The discovery and mobility of oil led to the formation of coal cartels and lobbies for intergovernmental protection such as the European Coal and Steel Community.⁴⁶ The threat to the first-mover petroleum companies in the United States by cheaper oil producing countries owing to the mobility of oil led to payments to resource-owners such as Ibn Saud to reduce production and supply of oil. In parallel – and counterintuitively – there was a move among regulators and the oil industry in the United States to incentivise lifestyles and products that consumed large amounts of energy to maintain (at least for a short period) the artificial scarcity and relatively higher prices of oil.⁴⁷ The primary industry that rose to energy-intensive middle-class aspirations was the automobile industry. Motor vehicles industries in Europe competitively invested in passenger cars. This is one example of how the materiality of fossil fuels was translated into naturalised high-energy consumption activities. Thus, selective regulation facilitated the growth of the consumption of fossil fuels, and it is within this paradigm that the individual consumer is situated.

Within this context, it is difficult to put one's finger on a single influential mediator (unlike Mr. Beavan's camera), and it is also difficult to point a finger at a single party that could be made responsible for anthropogenic climate change.⁴⁸ As is well known in climate liability disputes, causality is difficult to establish, and thus from the causal perspective, it is difficult to say why a household like Mr. Beavan's is morally praiseworthy, or a gas-guzzling household is morally blameworthy. This is why both legal disputes that centre

⁴⁵ For an account of competing interests that came into being after the discovery of coal, see Barbara Freese, *Coal: A human history* (Cambridge, MA: Perseus, 2003).

⁴⁶ Timothy Mitchell, 'Carbon Democracy' (2009) 38:3 *Economy and Society* 399, p. 408.

⁴⁷ Ibid, p. 409.

⁴⁸ Mitchell provocatively points to the post-war economics profession including economists such as Keynes, Hicks, Samuelson, Arrow and Debreu to be either indifferent to or argue against the significance of the costs of climate change in economic measurements, either in indices such as the GNP or in theories of welfare. Ibid, pp. 416 – 418.

on causality as the basis for identifying the polluter who would be held liable,⁴⁹ as well as philosophical investigations that centre on the notion of fairness that one should get (or pay for) what one deserves, inevitably flounder. This is precisely where L&E would be useful, which warrants a detour into a couple of its primary intellectual developments.

It is likely that Ronald Coase and Guido Calabresi had laid the foundations of L&E around the same time without being aware of each other's work.⁵⁰ Though their names are often said in the same breath, Calabresi took pains to clarify his interpretation of Coase's work that was dramatically different from George Stigler's interpretation – and indeed invention – of the so-called 'Coase theorem'.⁵¹ The motivation behind their work appears to be very similar: a crucial deviation by both Coase and Calabresi from a causality-based approach to the polluter-pays principle is decentering the idea that identifying the activity or party who caused harm should be the heart of analytical inquiry. Calabresi chose to concentrate on 'accident-like' situations.⁵² Coase showed the uncertainty and inconsistency of the imposition of causal responsibility in environmental cases; there was no guarantee that causal responsibility would be the best way to deal with the pollution itself. The solution, therefore, was to keep one's eye on the social cost such as the fact of pollution. In a Coasean world, perpetrators and victims would wish to deal with a social cost without taking too much of a hit; they would be both well placed and motivated to know their private costs and hence negotiate their way to a mutually agreeable

⁴⁹ This is why the climate change cases that seems to have had some success reason out the requirement to take action based on other principles such as the State's duty of care towards citizens in *Urgenda* or the public trust doctrine in the ongoing *Our Children's Trust* case in the United States.

⁵⁰ Steven Medema, 'Juris Prudence: Calabresi's uneasy relationship with the Coase theorem' (2014) 77 *Law & Contemporary Problems* 65, p. 65. Mattei calls Calabresi 'the true creator of law and economics'. Ugo Mattei, 'The Rise and Fall of Law and Economics: An essay for Judge Guido Calabresi' (2005) 64 *Maryland Law Review* 220, p. 230.

⁵¹ Ronald Coase, 'The Problem of Social Cost' (1960) 3 *Journal of Law and Economics* 1; George Stigler, *The Theory of Price* (New York: Macmillan, 1966), p. 113; Calabresi has developed his interpretation of Coase's work over several papers chronicled in Medema 'Juris Prudence' *supra*; the primary themes are discussed in Part V of Chapter 5.

⁵² Guido Calabresi, 'The Decision for Accidents: An approach to nonfault allocation of costs' (1965) 78 *Harvard Law Review* 713.

solution. This solution would also serve the public good or be an efficient solution in the absence of transaction costs. The Stiglerian interpretation of this view is that the point of regulation is to facilitate a zero transaction cost world so that parties can freely negotiate and pursue their rational interests using a market mechanism.⁵³ Coase subsequently clarified that the Stiglerian view – that the Coase Theorem means that if we assume zero transaction costs, participants of a market can be left to their own devices to reach an efficient solution – is not what he meant.⁵⁴ The Calabresian interpretation is that we cannot assume a zero transaction cost or distribution-neutral world and so law makes the least cost avoider – or the agent that can fix a problem at the lowest cost - liable for social costs. Conversely, those who bear high costs given their situation in the distribution chain would have an entitlement to be free of social harm. Essentially, it is not that the Calabresian view (that has been altered somewhat over time) is a critique of Coase’s work, but it is a distinct interpretation of it. To clarify, a Coasean world as interpreted by Stigler is to concentrate on how to arrive at a zero-transaction cost world and the concentration is the reduction of transaction costs. A Coasean world as interpreted by Calabresi is how to achieve at desirable social outcomes in a non-ideal world given the existence of positive transaction costs, and hence concentrating on issues of distribution.⁵⁵ In both circumstances, regulation

⁵³ This also provides the basis for an Ellicksonian view, where it is possible for parties to negotiate efficient solutions without the shadow of law. Robert Ellickson, *Order Without Law: How Neighbors Settle Disputes* (Cambridge, MA: Harvard University Press, 1994).

⁵⁴ As Coase explains, a world of zero transaction costs is “the world of modern economic analysis, and economists feel quite comfortable handling the intellectual problems it poses, remote from the real world though they may be.” He clarifies, “It would not seem worthwhile to spend much time investigating the properties of such a world.” Ronald Coase, *The Firm, the Market and the Law* (Chicago: University of Chicago Press, 1988), p. 15.

⁵⁵ I have realised retrospectively that I have a bias towards the latter point of view. I arrived at this bias because my analysis concerns people and not firms. I will demonstrate that when it comes to people there is a *fundamental and computational problem* to overcome: fundamentally, the multi-dimensional nature of people’s lives and goals cannot be equated to that of organisations and firms. Computationally, their transactions costs are far more difficult to quantify and reduce. This bias need not afflict scholars investigating the behaviour of firms in relation to climate change, and who study regulations with the assumption that the end justifies the means; i.e. the requirement to reduce emissions at the lowest monetary cost is how we assess the effectiveness of regulation. I do not have that luxury.

is inevitable. In the first situation, it is to identify parties that need to be regulated, assign property rights as well as to identify and mitigate transaction costs for assignees of rights so that markets can work. And in the second, it is to put in place complementary constraining mechanisms to ensure the achievement of desirable social outcomes. I will expand on how this applies to climate regulation in Chapters 4, 5 and 6.

I took the reader through the detour above to make a couple of observations. The first is that individual behavior with respect to emissions is contextually situated, and due to the legal and political history of fossil fuels, implicitly regulated. Secondly, given this implicit regulation, causal responsibility is difficult to attribute. Thirdly, the difficulty of attributing causal responsibility does not mean that there is no space for regulation such as the creation of incentives, or even the imposition of liability. Rather, regulation is inevitable. The absence of specific regulation would imply a world where existing transaction costs and positionality with respect to distributional choices shape behavior. Thus, regulatory choices such as the creation of incentives or the imposition of liability require consideration of the state of affairs to appreciate the possibility of effecting any desirable or meaningful change in behaviour. Returning to the Beavan household, I am interested in the camera – and external behaviour-shaping forces – only if it serves an instrumental social function of meaningfully reducing emissions. In other words, if it plays an effective regulatory role. I also do not think we should praise or blame Mr. Beavan depending on our worldviews, but assess whether his actions are warranted, whether it is worth it to make bold decisions for some people (his family) and ignore others (the rest of the world essentially), and more importantly, whether everyone else – in my book all European citizens – need to be regulated to be some version of Mr. Beavan. And if yes, whether there might be an incentive that achieves a reduction of emissions without imposing unjustified burdens.

Keeping the properties of *situational informants of individual behaviour, associative incentives and situated motivation, transaction costs and distributional concerns*, we can proceed to a discussion of the primary analytical lenses sought to be utilised as well as understood: BLE.

II. METHODOLOGY AND AXIOLOGY

“Most scientists tend to understand little more about science than fish about hydrodynamics.”

—Imre Lakatos, *Falsification and the Methodology of Scientific Research*.

To my mind, there are three ways of doing BLE. The first way is to use the findings of experimental psychology, make changes to economic models and studies, and apply them to legal issues. This is usually the method preferred by lawyers. To some extent, this is how I conduct some of the literature review in Chapter 2, where I claim to adopt a BLE approach. I apply a similar but somewhat unconventional approach in Chapter 3 – I arbitrage the idea of causal inference found in statistical methods to develop an analytical framework of engaging with expertise in legal inquiry. This may be considered as ‘simple arbitrage’ akin to Thomas Ulen’s critique of the usual practice of interdisciplinary work in law.⁵⁶ Scholars more invested in the methodology of economics demonstrate that an application of knowledge may be viewed as an interpretation of knowledge (the hermeneutic view);⁵⁷ and Ulen’s critique would therefore pertain to how interpretation is done. The second is to mimic the science of behavioural economics, which in turn is to either mimic the work of cognitive and social psychologists, or the work of economists who incorporate psychological findings to create more complete economic models. This is the preferred method by legal scholars who seek scientific sophistication or believe that empiricism is a value in itself such as Christoph Engel discussed below. This inspired my lab experiment in Chapter 4 and the survey in Chapter 5.

The third way is similar to the way L&E itself has developed ‘a flavour and dynamic of its own’⁵⁸ drawing on other disciplines. Though there is engagement with sophisticated legal inquiry and economic inquiry, the existence of L&E is independent of a form of internal correctness that may be true either for a particular field of law or a particular field of economics. This is the approach

⁵⁶ Thomas S. Ulen, ‘A Crowded House: Socioeconomics (and other) Additions to the Law School and Law and Economics Curricula’ (2004) 41 *San Diego Law Review* 35, p. 51.

⁵⁷ Sheila C. Dow, *Economic Methodology: An inquiry* (Oxford: OUP, 2002), pp. 113 – 115.

⁵⁸ Ulen, ‘A Crowded House’, *supra*.

adopted by scholars such as Calabresi.⁵⁹ Much as one does not need to be a tort lawyer or an economist to contribute to L&E, one does not need to be labelled a psychologist to contribute to BLE. This is true for some of the leading BLE scholars working today.⁶⁰ What is common to a Calabresian way of doing L&E and BLE scholars – and the reason it is particularly relevant for thinking about novel policy considerations – is the interest in designing new institutions, and theoretical innovation. There is neither a settled institutional framework on a mandatory emissions trading scheme for people, nor has the coherence of BLE as a discipline been worked out.⁶¹ I do not have the luxury of scholars working on improving and retrospectively analysing schemes such as the European Union Emissions Trading Scheme (EU ETS), and nor do I work within the settled boundaries of a scholarly discipline.⁶² BLE is, therefore, the approach that I adopt for most of the book. I need to make a clarification here. The independence of such ‘flavour and dynamic’ is debatable as there is an inclination to mimic the way L&E itself is done; i.e. to supplement analytical insights in L&E with BLE empiricism to make inquiries more ‘whole’ by filling in for lapses in rational behaviour. In Mirjam-Sent’s account of the history of behavioural economics, the reason why the findings of Kahneman and Tversky were well received by economists as against the earlier efforts of psychologists is because such findings did not pose a threat to economics as a discipline; on the contrary, they helped rebuild mainstream economics.⁶³ Briefly put, unlike the ‘old’ psychological inputs into economics that

⁵⁹ As Hackney puts it, “Although closely aligned with law and neoclassical economics, Judge Calabresi, aside from rejecting distribution agnosticism, has always been less tightly bound to the idea of law as science.” James R. Hackney Jr., ‘Guido Calabresi and the Construction of American Legal Theory’ (2014) 77:2 *Law and Contemporary Problems* 45, p. 47.

⁶⁰ See discussion in Chapter 3, *infra*.

⁶¹ Russell Korobkin and Thomas Ulen, ‘Law and Behavioural Science: Removing the rationality assumption from Law and Economics’ (2000) 88 *California Law Review* 1051, p. 1075.

⁶² There might be a dissonance between this approach and scholars trained within a particular scientific paradigm of doing economics, psychology, or even within the interpretative boundaries of a particular legal system. Hence Hylton: “...economic analysis is most valuable when it is helping us to solve existing puzzles, or understand institutions or conventions that exist, and less valuable when used to design new institutions.” Keith N. Hylton, ‘Calabresi and the Intellectual History of Law and Economics’ (2005) 64 *Maryland Law Review* 85, p. 93.

⁶³ Esther Mirjam-Sent, ‘Behavioral economics: How psychology made its (limited) way back into economics’ (2005) 36:4 *History of Political Economy* 735.

were rejected, the starting point of behavioural economists was expected utility maximisation, and then to trace deviations and conformity with such benchmarks found in economic models.⁶⁴ There is, therefore, the temptation to maintain the normative ideal of maximisation and use psychological findings to account for deviations from maximisation in economic models.⁶⁵ The same could be said about a normative position found in law. Though the incentives for legal scholars to subscribe to a normative ideal may be undercut given the interpretative nature of legal scholarship, any legal scholar who is wedded to a particular legal field and the settled positions therein⁶⁶ would be tempted to use psychological findings to buttress a normative ideal, or tie-up the loose ends of a category. This usually transpires into categories such as ‘inviolable contracts’⁶⁷ or – the one Calabresi and Melamed interrogated – inalienable entitlements.⁶⁸ In other words, much like the ‘As-if’ method of doing behavioural economics⁶⁹ or arriving at a correct legal position, it is possible to adopt an ‘As-if’ method of doing BLE. I adopt an ‘As-if’ method of doing BLE in the first part of Chapter 6 by working within the contours of the European legal order.

⁶⁴ Ibid, p.743. This is in stark methodological contrast to earlier efforts to move away from deductive reasoning, equilibrium outcomes and finding substitutes for utility maximization.

⁶⁵ Bruce Chapman, ‘Rational Choice and Categorical Reason’ (2003) 151 *University of Pennsylvania Law Review* 1169.

⁶⁶ This is usually found in originalist legal scholarship that subscribes to a view of what is correct based on doctrinal sources. See for instance Kim Lane Scheppele, ‘Jack Balkin is an American’ (2013) 23 *Yale Journal of Law and Human Rights* 25. I have also tried to show that this is true for some scholars who claim to do comparative legal research; a common practice is to take a friendly tour in the laws of another legal order and then come back to one’s preferred legal system for the serious analysis. Suryapratim Roy, ‘Privileging (some forms of) Interdisciplinarity and Interpretation: Methods in Comparative Law’ (2014) 12 *International Journal of Constitutional Law* 786.

⁶⁷ The fact that public interest is an exception to this normative position which can be interpreted in different ways shows that there is scope for interpretation.

⁶⁸ Guido Calabresi and Douglas Melamed, ‘Property Rules, Liability Rules and Inalienability: One view of the Cathedral’ (1972) 85 *Yale Law Journal* 1089.

⁶⁹ Nathan Berg and Gerd Gigerenzer, ‘As-if Behavioural Economics: neoclassical economics in disguise?’ (2010) 18 *History of Economic Ideas* 133. For an appraisal of how this is the preferred method of doing BLE, and the shortcomings of the same, see Shaun P. Hargreaves Heap, ‘What is the Meaning of Behavioural Economics’ (2013) 37 *Cambridge Journal of Economics* 985.

This is not, however, the only way in which BLE may acquire a voice in its own right. The way BLE can chart its own path is by querying the *analytical categories*⁷⁰ of L&E, as well as creating new analytical categories to reflect Kahneman's observation about preferences and choices being situated;⁷¹ and findings about choices being associated.⁷² The importance of concentrating on analytical categories in BLE's development as a discipline in its own right has been examined by scholars such as Claire Hill,⁷³ Bruce Chapman⁷⁴ and Karen Yeung.⁷⁵ The different ways of doing BLE may be diagrammatically represented as follows:

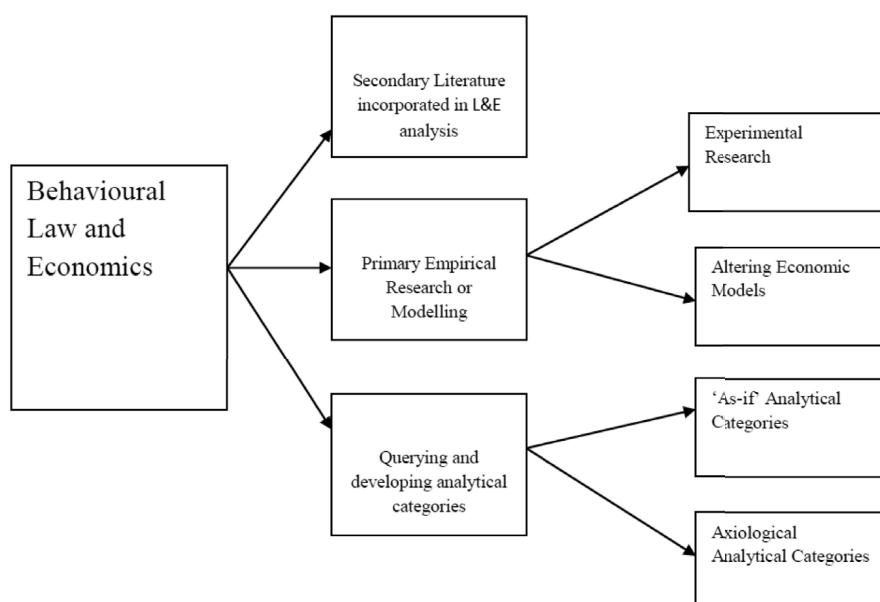


Figure 1: Ways of Doing Behavioural Law and Economics

⁷⁰ Claire Hill, 'Beyond Mistakes: The next wave of behavioural law and economics' 29 (2003) *Queen's Law Journal* 563.

⁷¹ Daniel Kahneman, 'Maps of Bounded Rationality: Psychology for behavioural economics' (2003) 93:5 *American Economic Review* 1449, p. 1469.

⁷² See discussion on 'associated coherence' earlier.

⁷³ Hill, 'Beyond Mistakes', *supra*; Claire Hill, 'A Positive Agenda for Behavioral Law and Economics' (2011) 3 *Cognitive Critique* 85.

⁷⁴ Chapman, 'Rational Choice ad Categorical Reason', *supra*.

⁷⁵ Karen Yeung, 'Nudge as Fudge' (2012) 75 *Modern Law Review* 122.

A brief explanation of the term ‘analytical category’ and what it entails is warranted. The phrase ‘analytical category’ is of central importance to science studies⁷⁶ and economic sociology.⁷⁷ Though it does not assume centrality to the work of L&E scholars, it has been relied on by pioneers as well as scholars interpreting the work of pioneers. Let us take for instance Carol Rose’s interpretation of Calabresi’s work.⁷⁸ Rose identifies ‘property rules’ and ‘liability rules’ as the two ‘analytic categories’ that lie at the core of Calabresi & Melamed’s *One View of the Cathedral*.⁷⁹ Rose further shows a background intuition about the need to deal with property distribution in accident-like situations (where people do not have the opportunity to plan in advance) informs the selection of these two analytical categories that sought to replace traditional legal categories of contract, property and tort.⁸⁰ As discussed earlier, Calabresi was already trying to deal with situations where people were faced with real-life difficulties without relying on a rational actor assumption. These categories may well be considered as part of the BLE canon that seeks to develop a voice of its own. Let us take a more conventional BLE example. While it may not be billed in such a fashion, the Thaler-Sunstein creation of a ‘nudge’⁸¹ is a separate analytical category. It does not involve incorporating experimental findings into economic models for application to regulatory concerns.⁸² Rather, it is using findings from experimental psychology as policy

⁷⁶ David Caudill, ‘Law, Science and the Economy: One Domain?’ (2015)5 *UC Irvine Law Review* 393.

⁷⁷ Michel Callon’s work on the interaction between the ‘firm’ and the ‘laboratory’ is concerned with how analytical categories found in either of these domains are re-invented during the process of interaction, or by association. See Michel Callon, ‘What Does it Mean to Say Economics is Performative?’ in Donald Mackenzie, Fabian Muniesa and Lucia Siu (eds) *Do Economists Make Markets?* (Princeton NJ: Princeton University Press, 2007), p. 311.

⁷⁸ Carol M. Rose, ‘The Shadow of the Cathedral’ (1997) 106 *Yale Law Journal* 2175.

⁷⁹ Calabresi and Melamed, *supra*.

⁸⁰ *Ibid*, pp. 2180 – 2181.

⁸¹ Cass Sunstein and Richard Thaler, *Nudge* (New Haven: Yale University Press, 2008).

⁸² Kahneman clarifies in an interview that *Nudge* is more psychology than behavioural economics: “When it comes to policy making, applications of social or cognitive psychology are now routinely labeled behavioral economics. The “culprits” in the appropriation of my discipline are two of my best friends, Richard Thaler and Cass Sunstein. Their joint masterpiece *Nudge* is rich in policy recommendations that apply psychology to problems—sometimes common-sense psychology,

heuristics⁸³ to desirably but mildly manipulate the environment in which choices and decisions are made. A nudge, therefore, is an analytical category in its own right, and it has taken substantial inquiry and critique over the last twenty years to give it substance. It is also tempting to think that nudge is the only meaningful analytical category of BLE as a discipline in itself. This is because the difficult exercise of balancing the paternalistic shaping of people's choices and preserving their liberty has been mostly confined to the idea of a nudge. This does not mean that there could not be other analytical categories that could be shaped within the discipline of BLE. In this book, I suggest and try to put in motion the development of several such categories: public responsiveness (Chapter 4), discursive capture (Chapter 5) and the category of the end-user itself (Chapters 6 and 7).

While writing this book, this endeavour to identify and explain analytical categories was not considered scholarship by scholars and practitioners interested in a scientific view of doing economics or considering all possible legal angles. This may indeed be a valid concern as this way of inquiry appears to be more arbitrary than either the first, second, or the 'as-if' method of conducting BLE inquiries described above. I would like to suggest that this method of scholarship is not idiosyncratic but central to BLE inquiry. In L&E, the normative position – that of interacting rational actors arriving at efficient solutions once institutions facilitated rather than obstructed

sometimes the scientific kind. Indeed, there is far more psychology than economics in Nudge. But because one of the authors of Nudge is the guru of behavioral economics, the book immediately became the public definition of behavioral economics. The consequence is that psychologists applying their field to policy issues are now seen as doing behavioral economics. As a result, they are almost forced to accept the label of behavioral economists, even if they are as innocent of economic knowledge as I am." Jesse Singal, 'Daniel Kahneman's Gripe with Behavioral Economics' available at: <http://www.thedailybeast.com/articles/2013/04/26/daniel-kahneman-s-gripe-with-behavioral-economics.html> [last accessed May 15, 2016]

⁸³ It may appear that the 'nudge' way of making policy interventions seems to be more compatible with Gerd Gigerenzer's smart or 'ecologically rational' heuristics approach rather than Kahneman's probabilistic irrationality approach (discussed in Chapter 3). This is interesting because Kahneman and Gigerenzer are professional rivals, so to speak. However, on closer examination a Nudge is more in line with Kahneman's approach due to its paternalistic orientation. Gigerenzer's interest is more oriented towards self-regulation, or how individuals can use better heuristics in everyday life rather than make decisions that border on optimality.

transactions – is clear. Sophisticated methodological choices would be made in the shadow of this axiomatic normative position, which explains an empirical and mathematical slant in L&E. BLE, however, is concerned with the axiom of the rational actor itself and inquiries are therefore *axiological rather than methodological*. Axiological inquiries entail a concentration on inductive theory-building, including creating a new vocabulary to capture new properties of the altered paradigm. By way of an example, Ulen points out that the central concern of L&E is ‘people respond to incentives.’⁸⁴ Accordingly, sophisticated institutional and new-institutional L&E will entail comparing incentives, how they can be designed, how they can be implemented and enforced. BLE, on the other hand, asks what ‘people’ means, what ‘responsiveness’ means, and what an incentive is; we cannot assume homogeneity among people, responsiveness does not necessarily mean strategic and competitive behaviour, and an incentive is different from motivation.

III. OUTLINE OF THE BOOK

A. Change in Outlook

This book started out very differently from what it is now. I was initially motivated to see how the EU ETS could be expanded to households, or how a cap-and-trade mechanism could be implemented at the household level. I had a comfortable research question: How can BLE help in implementing an end-user emissions trading scheme? I felt there were two primary obstacles: the first is that people are biased in different ways, and once these biases are removed, then uncapped emissions from the residential sector could be accounted for and operationalised via a cap-and-trade system. The second obstacle I felt was that an emissions trading scheme for households seemed complicated. If the system could be made simpler, then individual or household engagement would be made possible. Given the prevalence of the EU ETS in understanding the L&E of climate policy in the European legal order, I was of course influenced by the idea that expanding the EU ETS to households at a pan-European level was the way forward. These motivations would be evident to the reader in Chapter

⁸⁴ Ulen, ‘A Crowded House’, *supra*, p. 41.

2 where I seek to conduct a literature review on the subject, and (to my mind) have an optimism bias. The orientation is to glean from the literature issues that can be resolved through empirical work and identifying the correct legal basis. Accordingly, Chapter 2 looks at existing literature on similar schemes and identifies three primary challenges: public acceptability, political acceptability and the legal basis for a European scheme. To ferret out these issues I initially sought to understand relevant biases using psychological methods and assess how they could be negotiated, gauge the inclination of regulators across Europe through surveys towards aspects of such a scheme, and learn European climate law to see if such a scheme could be accommodated.

But then things happened. It began with a methodological unease while I was going about thinking about how to deal with public and political acceptability. I attribute a change in perspective to three events that occurred in the year after I completed Chapter 2. The first was a line in Daniel Kahneman's *Thinking Fast and Slow* where he says that despite a lifetime of research, his "...intuitive thinking is just as prone to overconfidence, extreme predictions, and the planning fallacy as it was before I made a study of these issues."⁸⁵ He applies the same pessimism to climate responsive behaviour.⁸⁶ Thus, the leading light of behavioural economics tells us that knowledge of biases is not enough to overcome them. If that is the case, then could we expect individuals and households to reduce their marginal abatement costs to respond to a cap-and-trade incentive? Perhaps knowledge of biases can have an effect on deliberative thinking rather than intuitive thinking. However I found no evidence to this effect; on the contrary the inability of people to move from an 'intuitive System 1' to a 'deliberative System 2' is what justifies paternalistic interventions. I couldn't think straight till I explored this issue further, and this resulted in my paper on 'Agency as Responsiveness'⁸⁷, where

⁸⁵ Daniel Kahneman, *Thinking Fast and Slow* (London: Farrar, Giroux and Strauss, 2002), p. 417.

⁸⁶ In an interview, Kahneman says that 'no amount of psychological awareness' would lead people to change how they live to respond to climate change issues. See Marshall, *supra*, p. 56 – 58.

⁸⁷ Suryapratim Roy, 'Agency as Responsiveness', European University Institute Working Paper, 2016/04.

I argue that BLE does not teach us how individuals can develop the agency to negotiate social spaces (or transact, to use the language of L&E), and for that we need a responsiveness paradigm. The second was a conference organised at Erasmus University Rotterdam⁸⁸ with Cass Sunstein as a guest speaker. A question was raised in the discussions but was left unanswered – why would people buy his (co-authored along with Richard Thaler) bestselling book *Nudge* if it did not help them make decisions? On the contrary, would knowledge about biases and inability to act on them create an optimism bias in itself? But more important than this was the audience response to a paper by Christoph Engel, one of the most prominent advocates of an empirical approach to law working today.⁸⁹ Engel had an insightful experimental study on the use of sanctions.⁹⁰ At the end of his study, there was a question from the audience (among a couple of others in a similar vein): what policy inferences can we draw from the study? The answer was – and this captured a trend I noticed in behavioural economics generally – that the contribution is a scientific study and policy inferences cannot flippantly be drawn. However, similar questions are rare in L&E contributions that use econometric methods, mathematical modelling and game theory. I realised this made the piecemeal empirical orientation of BLE distinct from the modelled empiricism of L&E: in L&E, the scientific pursuit of efficiency is the normative basis of law. The intuitive core of L&E that people and institutions are looking out for their interests and liberty is in conformity with social welfare, and theoretical and empirical sophistication of this intuition is acceptable. Not so in BLE. The intuitive core is hard to digest: people are not looking out for their interests, and liberty is not in conformity with social welfare. The third event was when I experienced the inevitable gap between science and policy in my own stab at empirical work. To understand public acceptability, I realised there was a gap in experimental work on motivation: the nature of an environmental

⁸⁸ *Nudging and Beyond: Current applications and new perspectives on behavioral insights*, Rotterdam, 7 November 2013.

⁸⁹ For a recent paper, see Christoph Engel, 'Empirical Methods for the Law', Preprint of the Max Planck Institute for Research on Collective Goods Bonn 2017/7.

⁹⁰ Christoph Engel, 'Deterrence by the Use of Sanctions', *Ibid.*

incentive was understood to be as important (if not more) than the size of an incentive, but properties of the nature of such incentives were not clear. Applying prospect theory to cap-and-trade, I wanted to test if a method of allocation where people have to ‘earn’ allowances would lead to more climate-friendly choices. I conducted the experiment discussed in Chapter 4 at the Faculty of Economics under the guidance of Jan Willem Bolderdijk, a social psychologist who studies incentives. One afternoon in-between sessions in the lab, I realised the very limited question my experiment could answer, which quite simply was the relevance of loss aversion to climate-friendly choices. I kept troubling Jan Willem with questions such as: is there any way we can infer from this experiment that an auctioning system is preferable to a grandfathering system? Could we say that a small incentive properly deployed works better than a small tax? In response Jan Willem communicated what must have been obvious to him but was difficult for me to accept: a psychological study is better if it is smaller. I understood then the dissonance between my analytical orientation and Jan Willem’s scientific mind: the point of an experimental study is to cut out the noise of the world and concentrate on as few variables as possible. Thus, while those who seek policy relevance think in generalisation, an empirical psychologist thinks in specifics. These two orientations are more dissonant than compatible.

The above three events led specifically to my paper on *Moderators and Mediators of Normative Reductionism*, which I have included as an integral part of this book (Chapter 3). I try to develop an analytical framework for how policy and science interact. More generally, the events marked a shift in my worldview. I felt that what is more relevant than doing empirical work in the social sciences is to try and understand how to use them. This is necessarily a speculative process, involves inductive-theory building, and dramatically changed the approach of my book. I could no longer ‘perform’ Chapter 2, but had to reconsider the assumptions and categories used therein; an approach that is prevalent throughout the book. Two concerns – the possibility of inclusion of the individual in a cap-and-trade scheme like the EU ETS, and the potential of BLE as a preferred lens to examine this regulatory option – animate the dissertation. The central question may be formulated as: is it desirable to have an end-user emissions trading scheme in the EU, and what can BLE say about it?

B. Chapterisation and Contributions

Considering the above approach, this is how the book stands.

Chapter 1 is this somewhat long introduction where I try to provide a narrative account of the struggles and processes of engaging with the idea of incentivising household engagement with climate change.

Primary Contributions

- Provides a contextual background for an End-user Emissions Trading scheme (EET), concentrating on the discontents of voluntary climate action, the operation of incentives and motivation, and how to approach climate regulation.
- Develops a framework for doing BLE research, highlighting the importance of axiological inquiry.

Chapter 2 is a literature review on schemes similar to an EET, but is also indirectly an account of how such a scheme may be implemented, and the obstacles that lie in its path. The primary take-away from the chapter is that public acceptability, political acceptability and double counting are the primary challenges. Taking a leaf from the EU ETS, it also suggests that in contrast with cognate proposals that have been considered, the scale and scope of an EET can in fact be broadened.

Primary Contributions

- Reviews literature on policy mechanisms akin to a cap-and-trade scheme for individuals, and suggests extending scale and scope of such schemes.
- Advances arguments for an EET scheme, primarily capping uncapped sectors, regulating offsets & voluntary sustainable behaviour, and achieving energy efficiency.
- Identifies challenges including justice & equity considerations, enforcement, public acceptability and political acceptability.

Chapter 3 may be viewed as a separate chapter on methodology, but I prefer to think of it as a substantive component of a book that tries to negotiate the still nascent field of BLE. As described earlier, it chronologically follows the literature review because it revisits the question of how knowledge is selected

and used. Concentrating on BLE and climate change, I suggest in the chapter that the time has come to move away from looking at science and politics as conflicting categories, but work towards examining how they are associated and suggesting processes whereby expertise may be translated into law. I arbitrage the statistical tools of mediation and moderation into analytical reasoning on regulation.

Primary Contributions

- Conceptualises the use of expertise in legal inquiry as a process of testimonial exchange.
- Maps institutional engagement with expertise in the EU and US, arguing in favour of developing analytical tools for negotiating expertise by legal scholars and decision-makers.
- Drawing on legal theory and Science and Technology Studies, develops a ‘moderated-mediation’ framework of climate regulation.

Chapter 4 interrogates the concept of public acceptability, demonstrates why ‘public responsiveness’ is a preferable heuristic, and in the process engages with the question of how a laboratory experiment may be translated into policy. Specifically, I report on and analyse a novel laboratory study on one aspect of a proposed EET scheme: whether the manner of allocation of allowances has an effect on climate choices. Subsequently, there is an attempt to understand what inferences can and cannot be drawn from the experiment.

Primary Contributions

- Conceptualises public acceptability as acceptability of instruments and acceptability of context, re-categorises ‘public acceptability’ as ‘public responsiveness’.
- Reports on an experiment on whether loss-aversion plays a role in designing an incentive, which would inform the manner of allocation; the results were inconclusive.
- Develops a framework for drawing inferences from psychological experiments for regulatory decision-making, concentrating on what inferences can be drawn, what may not, and the costs of making inferences.

Chapter 5 interrogates the concept of political acceptability and demonstrates why ‘political acceptance’ is a preferable heuristic. Initially I suggest that the behaviour of regulators is essentially their stated preferences – or their behaviour is anchored by justification – and accordingly attempts a survey of experts and regulators. However, responses to a Pilot Survey as well as a parallel project I pursued led me to a different way of thinking about the BLE of regulators: the political economy of discursive capture, where regulatory engagement is situated in a path-dependent way of understanding and deciding on policy issues.

Primary Contributions

- Conceptualises political acceptability as making political choices, argues against treating regulatory choices as individual choices, thus arguing in favour of stated preferences.
- Reports on a pilot survey and a survey on concerns related to an EET; the response rate for the survey was low, so no conclusive results are drawn, while responses to specific items are discussed.
- Considers political economy considerations of EET, concentrating on a possible substitutive effect vis-à-vis the EU ETS and lobbying by different agents to enjoy the ‘opportunity benefits’ of an EET as compared to alternative potential regulation.
- Conceptualises ‘discursive capture’ as a way to apply BLE to regulatory decision-making, and suggests ways to prevent discursive capture, reflects on a Calabresian concentration on distribution as negotiating the capture of justice-based and efficiency-based discourses; the EU ETS is thus conceptualised as an instrument that combines assignment of liability and a market mechanism.

Chapter 6 picks up on the idea of extending the scope of the EET beyond the nation-state and argues that the European and Member State climate policy are intertwined in relation to both the constraining and facilitative role of European regulation, as well as in relation to responsibility distribution, allocation of burdens and implementation. This leads us to have a nuanced view of the operation of subsidiarity, concentrating on the iterative role of administrative federalism in the EU legal order, the issue of leakage, and

finally how climate governance points to a re-categorisation of the ‘end-user’.

Primary Contributions

- Maps the relationship between EU regulation and Member State climate regulation, concentrating on the EU ETS and Effort Sharing Decision, analyses the relationship between distribution of responsibility, allocation of burdens and implementation in multi-level climate regulation.
- Interrogates the category of a ‘sector’ and ‘source’ of emissions, highlighting the importance of inventorying direct and indirect emissions.
- Identifies administrative federalism, the issue of leakage, as well as Monitoring, Reporting & Verification as subsidiarity concerns.
- Re-conceptualises an ‘end-user’ for the purpose of mitigation as the Most Advantaged and Least Cost Avoider of emissions activities, as against an individual or a household that is the source of emissions.

Chapter 7 interrogates the idea that the question of ‘who’ is to regulate and be regulated is intimately connected to the ‘how’. The justificatory tools that the proportionality principle provides are utilized to understand qualitative costs and benefits of regulating individuals and households through an EET.

Primary Contributions

- Argues that individuals have no inalienable entitlement to emit, but have a right to be free of climate risk, which may require individuals to be mandatorily drafted into climate regulation.
- Argues that legitimacy of mandatory climate regulation does not imply appropriateness of chosen regulation, employs proportionality as an analytical tool to assess the necessity and suitability of an EET scheme.
- Argues that an EET scheme has irresolvable and incommensurable costs, whereas the benefits are either secondary or may be achieved through other mechanisms.

As the findings of individual chapters are summarised at the end of every chapter, **Chapter 8** avoids repetition and briefly concludes on a reflective note.

2

EXPLAINING END-USER EMISSIONS TRADING: A REVIEW*

2

I. INTRODUCTION

The EU ETS, which has been up and running since 2005, involves large carbon emitters, including power plants and steel makers. More actors and sectors such as aviation are being brought within its ambit. At first glance, the proposition to also involve individuals in an EU-wide emissions trading scheme seems too academic to be seriously considered in boardrooms or government departments given its seemingly unresolvable economic and ethical problems. The suggestion may also appear to be quite invasive as it evokes thoughts on food rationing, an imposition of ‘green’ choices, and perhaps even the potential failure of yet another market-based instrument. But there are also several developments that lend support to the idea of emissions trading for individuals.

First, individuals are already involved in climate-driven market transactions: there are currently dozens of ‘carbon card programmes’ offered by financial houses and companies in the EU, inviting people to offset their emissions by making ‘green’ investments.¹At the time of writing this chapter,

* This chapter is an updated version of Suryapratim Roy and Edwin Woerdman, ‘End-user Emissions Trading: What, why, how and when’ in Martha Roggenkamp and Olivia Woolley (eds), *European Energy Law Report IX* (Cambridge: Intersentia, 2011).

two companies based in Geneva were offering a Christmas Offset Package, where, depending on the cost of cards purchased, 0,2 tonnes to 1,25 tonnes of carbon dioxide can be offset.² Second, individuals do already benefit from trading emissions: in some cases, for instance, it is now more profitable for farmers not to cut down trees than to sell wood,³ the financing of which is generated internationally through voluntary carbon markets.⁴ There have been several criticisms, though, directed against the recent inclusion of deforestation in the flexibility mechanisms of the Kyoto Protocol within the United Nations (UN) Framework, given their scope for misuse.⁵ Third, emissions trading for individuals has even entered the policy arena: the Environmental Audit Committee (EAC) of the House of Commons in the United Kingdom (UK), for example, has concluded that involving households is critical for reaching emissions reduction targets, and that a trading system is preferable to other available instruments, although it is seen as politically non-implementable at this moment.⁶

From the above, it is clear that individuals are already engaging in market-based approaches to climate change, and that formal institutions in some countries like the UK are of the opinion that such engagement is crucial for effective action to reduce emissions, if done in a rational manner under regulatory guidance. Therefore, the central question of this chapter is: why is emissions trading for energy-end users desirable, how could such a scheme be designed and under what conditions could such a scheme be acceptable?

¹ Sandrine Rousseaux, 'An International Survey of Individual Carbon Card Programmes', Report for ADEME, 2010

² Ibid, p. 55

³ Sue Neals, 'Emissions Trading Scheme: Take a Leaf out of Our Book', *The Australian*, October 12 2011

⁴ Valerie Volcovici, 'A Slow Start for the Carbon Credit Market', *The New York Times*, July 24 2011

⁵ See for instance Ariana Densham, Roman Czebiniak, Daniel Kessler, Rolf Skar, 'Carbon Scam: Noel Kempff Climate Action Project and the Push for Sub-national Forest Offsets', Greenpeace 2010. Available at: <http://www.greenpeace.org/usa/Global/usa/report/2010/1/carbon-scam-noel-kempff-clima.pdf>.

⁶ Environmental Audit Committee, House of Commons, UK, *Personal Carbon Trading: Government Response to the Committee's Fifth Report of Session 2007-2008*, London, May 26, 2008, p. 20.

This chapter highlights some of the primary issues regarding the possibility of engaging the end-user in a pan-European emissions trading market under legal and regulatory supervision.

This chapter is organized around four basic questions: what, why, how and when. Before answering the central question, we begin in Section II by defining what we mean when referring to end-user emissions trading ('what'). Section III then provides some arguments in support of end-user emissions trading ('why'). Section IV analyzes various design variants of an end-user emissions trading scheme, including some economic trade-offs and legal problems ('how'). Section V centres on the prospects of an acceptable system of end-user emissions trading ('when'). Finally, in section VI, a conclusion is presented.

II. WHAT IS END-USER EMISSIONS TRADING?

In this section we introduce the concept of end-user emissions trading after taking stock of the conceptual variants that have already been articulated in the existing literature on the subject.

A. Personal Carbon Trading

Current research on emissions trading for energy end-users is focused largely on Personal Carbon Trading (PCT).⁷ The PCT concept is used to describe a set of schemes largely developed by researchers working in energy and environmental research institutes in the UK, a compilation of which has been published in a special edition of the journal *Climate Policy*.⁸ It is also the preferred terminology adopted by the House of Commons' EAC in relation to proposals around end-user emissions trading.⁹ The core idea, derived from a combination of David Fleming's idea of conserving

⁷ For a review of research on the subject see Gill Seyfang *et. al.*, 'Personal Carbon Trading: Notional concept or workable proposition? Exploring theoretical, ideological and practical underpinnings, (2007) *Working Paper - Centre for Social and Economic Research on the Global Environment* (1), pp. 1-31.

⁸ Yael Parag and Tina Fawcett (eds.), *Personal Carbon Trading* (Oxford: Earthscan Climate Policy Series 2010).

⁹ Environmental Audit Committee, *Personal Carbon Trading, supra*.

fuel by way of a Tradable Energy Quota (TEQ)¹⁰ and the Hillman-Fawcett proposal of budgeting of allowances by individuals,¹¹ is captured by Brohé: “the scheme would be a mandatory cap-and-trade emissions trading system where allowances would be allocated directly to individuals on an equal per-capita basis”.¹² There have been some variations of the PCT proposed, for instance by using an unequal allocation basis, but the central characteristics¹³ of setting a national carbon budget, allocating to individuals and requiring surrender of allowances are constant.

There are five features we would like to highlight in PCT schemes: (i) the objective is to reduce the *consumption* of energy and fuel; (ii) the preferred form of allocation and surrender of allowances happens *downstream*, i.e. the unit which gets, trades and surrenders these allowances is the individual; (iii) the *sectors* suggested for inclusion in a PCT scheme are the residential sector and the transport sector as the activities contemplated revolve around household energy consumption and fuel use for personal transport; (iv) the aspect of *cap-and-trade* is what allows this system to be environmentally effective and economically efficient, as an individual would reduce her consumption of energy or fuel to a level where the benefit derived from the final unit of consumption is equal to or greater than her marginal cost of sacrificing such units. If she requires to consume more than a predetermined limit (or cap) of total permissible emissions, then additional allowances have to be bought; on the other hand, if she can limit her consumption, then she can sell her excess allowances. Finally, (v) the suggestions till now have been limited to *a national scheme*.

¹⁰ David Fleming, *Energy and the Common Purpose: Descending the Energy Staircase with Tradable Energy Quotas* (London: The Lean Economy Connection, 2005).

¹¹ Mayer Hillman and Tina Fawcett, ‘Living in a low-carbon world: the policy implications of rationing’, *Conference Proceedings, UKERC and PSI Seminar*, June 30, 2005.

¹² Arnaud Brohé, ‘Personal Carbon Trading in the context of the EU Emissions Trading Scheme’, (2010) 10 *Climate Policy* 462, p. 463.

¹³ Catherine Bottrill, ‘Understanding Domestic Tradeable Quotas (DTQs) and Personal Carbon Allowances (PCAs)’, *Working Paper- Environmental Change Institute*, 2006, Oxford.

B. Other Proposed Schemes

While the aspects of design will be discussed in greater detail in Section 4, suffice it to say at this juncture that a PCT scheme would generally involve substantial administrative and transaction costs. With a view to reducing such costs integral to the ‘downstream’ component of the PCT, Sorrell offers an ‘upstream alternative’ where allowances are surrendered by fossil-fuel producers or suppliers for the carbon contained in their fuel sales instead of by consumers.¹⁴ The involvement of upstream actors is also found, albeit in a different way, in the *cap-and-dividend* and *cap-and-share* proposals. Originally articulated by Barnes,¹⁵ cap-and-dividend is a scheme where all emissions rights are auctioned by governments to fuel suppliers, and the revenue from such auctions are distributed to individuals on an equal per-capita basis. Two American senators have actually tabled a ‘Carbon Limits and Energy for America’s Renewal Act’ based on such a cap-and-dividend system before the Senate, but there has been no progress in this regard.¹⁶ Unlike cap-and-dividend, under the cap-and-share variation individuals are given emission rights for free (or: ‘grandfathered’) on an equal per-capita basis, which they sell to fuel suppliers via agents such as banks and post offices, and they in turn surrender such allowances.¹⁷ Though in the cap-and-share scheme it is the final consumer who is allocated rights, a robust trading mechanism is not envisaged.¹⁸ Woerdman and Bolderdijk have offered a combination of features of the PCT and upstream variants, advocating a ‘downstream allocation’ and ‘upstream monitoring’ mechanism, allowing for the involvement of individuals integral to a

¹⁴ Steve Sorrell, ‘An Upstream Alternative to Personal Carbon Trading’ (2010) 10 *Climate Policy* 481.

¹⁵ Peter Barnes, *Who Owns the Sky: Our Common Assets and the Future of Capitalism* (Washington DC: Island Press, 2001).

¹⁶ The World Resources Institute has a summary on the Bill. Available at: <http://www.wri.org/stories/2010/02/wri-summary-carbon-limits-and-energy-americas-renewal-act>.

¹⁷ FEASTA, *Cap & Share: a fair way to cut greenhouse emissions* (Dublin: Feasta, 2008).

¹⁸ Ibid

downstream system, and working towards reducing administrative costs at the same time.¹⁹

Another upstream model, which consciously distinguishes itself from the PCT model, is the one developed by a conglomeration of Finnish research institutes [hereinafter the “Finnish Proposal”] which involves collection of allowances at a retail level. However, what distinguishes the Finnish Proposal is its attempt to include sectors other than household energy and fuel use (as it refers to “meaningful coverage of products and product groups”²⁰), primarily foodstuffs. Further, although not expressly discussed in the Finnish Proposal, it has the potential to extend beyond national borders. Thus, although the research concentration till now has primarily been on PCT and its variants, changing some features can give way to different models.

C. Towards an End-user Emissions Trading Scheme

For the purposes of this chapter, the phrase ‘End-user Emissions Trading’ (EET) will be adopted to prevent confusion with a PCT scheme incorporating the features discussed above. While we agree with the proponents of PCT variants that a cap-and-trade scheme incorporating downstream advantages would be a useful mechanism, we would like to extend the conceptualisation of the ‘end-user’ to introduce the possibility of including other activities within such a scheme. Should an emissions trading scheme for individuals be restricted only to reducing the release of greenhouse gases from energy and fuel consumption, or is there some scope for extending the scheme to include other ‘greener’ choices? Such ‘greener’ choices could well be related to *consumption* (for instance, changes in food habits), *production* (household production of green energy or installation of enabling infrastructure) or *utilization of resources* (changes in land-use or deforestation). This leads to the second possible distinction from PCT, following the objective of the Finnish Proposal, for a scheme to be more inclusive: under EET it is possible for other sectors, specifically agriculture, to be brought within its ambit. And-while

¹⁹ Edwin Woerdman and Jan Wilem Bolderdijk, ‘Emissions Trading for Households? A Behavioral Law and Economics Perspective’ (2015) *European Journal of Law and Economics* 1.

²⁰ *Ibid* at 728

we're on the issue of expansion, we think it's worthwhile to investigate the possibility of implementing such a scheme on a supranational level involving multiple countries.

Before we move on to the reasons why an EET should merit regulatory consideration, there is one aspect which needs to be discussed. That is *who* would be involved in such a scheme (or: who are the stakeholders)? As would appear from the discussion above, other than proposals to involve wholesalers and retailers, it is individuals who are the unit of concern, and it is their emissions that are meant to be curtailed. There has been debate about whether the allocations should be made to households, as electricity and gas consumption happens at the household level, invoking questions of intra-household distribution and whether children should also be allocated allowances. The case for and complexity in involving individuals goes deep as we will see in the next section, but we would like to note the possibility of involving communities and local governments.

The idea that private governance initiatives i.e. voluntary self-governing co-operative actions are helpful in relation to environmental problems is clear,²¹ and in some cases, decentralised public governance such as by local governments could be better suited in terms of both informational advantages and physical infrastructure to motivate long-term behavioral changes among their constituencies.²² In the UK, Community Rationing Action Groups (CRAGs) have also become popular.²³ CRAGs are premised on motivating and facilitating co-operative action among carbon conscious people whereby methods to rationally implement emissions reduction activities at an individual and household level are adopted. This is done by methods such as information sharing, appointing a common carbon accountant to price and monitor the emissions of participants and disincentivising emissions by requiring over-

²¹ Tracey M. Roberts, 'Innovations in Governance: a functional typology of Private Governance Institutions' (2011) 22 *Duke Environmental Law & Policy Forum* 67.

²² Katrina Fischer Kuh, 'Using local knowledge to shrink the individual carbon footprint' (2009) 37 *Hofstra Law Review* 923-941.

²³ Rachel Howell, 'Living with a carbon allowance: the experiences of Carbon Rationing Action Groups and implications for policy' (2012) 41 *Energy Policy* 250.

emitters to contribute towards a common fund.²⁴ What is especially interesting about the potential of local governments and communities is that they cover various sectors and activities with substantial emissions such as waste management and land-use. In such cases, local governments and communities could be the most effective unit of reducing downstream emissions owing to their economic and administrative proximity to such sectors. If that is so, then could allocating emissions and surrendering from local governments and communities be an option? We would like to argue that, if a system design which allocates to individuals has a certain amount of flexibility for collective action, then private governance initiatives could also be incentivized. The regulatory requirement would be to determine how a reduction of emissions from a whole range of activities could be included within a single scheme of allowance trade.

Thus, the EET as described above may be characterized as a variant of the PCT, but one that extends its geographical and sectoral scope, and makes space for community or collective participation. With the above background on the PCT, EET and related instruments, we can move on to understanding why they merit political, regulatory and legal consideration.

III. WHY DO WE NEED TO INVESTIGATE AN END-USER EMISSIONS TRADING SCHEME?

Why should individuals concern themselves with climate change, and, the corollary, is it more an institutional concern? Unfortunately, a rhetorical response to this question would lead to ‘polar opposite’ views, one being that it is imperative for individuals to ‘kick the habit’²⁵ to deal with climate change. The other view is that by putting the responsibility on consumers to be ‘green’, and confining responses to climate change within the sphere of consumption, the actual political and commercial culprits are warding off culpability and

²⁴ Ibid, pp. 3-4

²⁵ This is generally the preferred position by international organisations, such as the United Nations Environment Programme .Available at: <http://www.unep.org/publications/ebooks/kick-the-habit/>.

costs.²⁶ Given the possibility of our selection-bias to present some opinions over others, a more systematic way of approaching divided opinions is by surveying attitudes, which is discussed further in Section 4. At this point, we would like to submit four reasons why there is need for regulatory attention to some form of an EET scheme: it allows for rational organisation of voluntary ‘green’ activities, facilitates rational participation in voluntary markets, has complementarities with the EU ETS, and may contribute to attaining energy efficiency.

A. Rationalising sustainable engagement

Climate change is now a popular cultural concern, as evidenced by its presence on the internet²⁷, in Hollywood blockbusters²⁸, and in literature²⁹. Apparently, climate change has even given rise to psychiatric illnesses.³⁰ There are also efforts by people across the world to ‘do their bit’, as was evident with Mr. Beavan discussed in Chapter 1. However, notwithstanding ‘green’ beliefs and attitudes, it is possible for such engagement to be both economically irrational and ecologically ineffective. In this regard, an American study found a negative correlation between general environmental knowledge and carbon offsets knowledge.³¹ What is effective engagement is a complex question, as the impact of individual activities on global emissions is difficult to conceptualise, but there is a solid economic case to be made

²⁶ For a strong articulation of this position, see Michael F. Maniates, ‘Individualization: Plant a Tree, Buy a Bike, Save the World?’ (2001) 1 *Global Environmental Politics* 31.

²⁷ Nelya Koteyko, ‘Mining the Internet for Linguistic and Social Data: An analysis of ‘carbon compounds in Web feeds’ (2010) 21 *Discourse Society* 665.

²⁸ For a review, see Michael D. Jones, *Heroes and Villains: cultural narratives, mass opinions and climate change* (2010), PhD Thesis, University of Oklahoma.

²⁹ The chief protagonists of the most recent works of two bestselling novelists writing in the English language are involved with climate change and related environmental issues. Ian McEwan, *Solar* (London: Waterstone Publishers, 2010); Jonathan Franzen, *Freedom* (New York: Farrar, Strauss and Giroux, 2010).

³⁰ Steven Moffic, “Is Ecopsychiatry a speciality for the 21st century?”, *Psychiatric News*, Apr 2008; 43 (7).

³¹ Micael Polonsky, Stacy Grau and Romana Garma, ‘Exploring US Consumers Understanding of Carbon Offsets’, Proceedings of the 2009 Academy of Marketing Science (AMS) Annual Conference, p. 14.

for either individuals or communities to maximize emissions-reductions through minimum sacrifice.³² Whitmarsh, Seyfang and O'Neill argue that a method for assessing engagement is by examining the 'carbon capability' of individuals;³³ i.e. "(...) the ability to make informed judgments and to take effective decisions regarding the use and management of carbon, through both individual change and collective action".³⁴ In their framework, carbon capability involves informed individual decision-making, translation of such decisions into practices and ability to participate effectively through collective action. Starkey and Anderson hypothesize that trading may cause people to be more aware of their personal emissions, more engaged with emissions reductions and more inclined to spend time and effort considering ways to reduce their emissions.³⁵ Consequently, it may be argued that the operation of a broad end-user carbon market will enhance the carbon capabilities of individuals and encourage more effective 'green' activities.

Some commentators have also warned us that the operation of a market to organise emissions reductions creates 'carbon selves' that require some budgeting and accounting skills, and hence a basic or even fairly sophisticated level of financial literacy.³⁶ This is why the subject of individual engagement with climate change has been a prime area of interest for behavioural economists, as they try to identify cognitive obstacles to such rational engagement. From a law and economics perspective, a cognitive obstacle may be viewed as a transaction cost, and the reduction of such costs by way of regulation would allow participants to make more efficient trading choices, notwithstanding the initial allocation of allowances. Thus, following this line of reasoning, the enhancement of carbon capabilities would be integral to reducing emissions in an efficient manner.

³² Warwick J. McKibbin, 'The role of economics in climate change policy' (2002) 16 *Journal of Economic Perspectives* 107.

³³ Lorraine Whitmarsh et. Al., 'Public Engagement with Carbon and Climate Change: To what extent is the public carbon capable?' (2011) 21 *Global Environment Change* 56.

³⁴ Ibid, p. 59.

³⁵ Richard Starkey and Kenneth Anderson, 'Domestic Tradable Quotas: A Policy Instrument for Reducing Greenhouse Gas Emissions from Energy Use' (2005) *Tyndall Centre for Climate Change Research, Technical Report* 39.

³⁶ Matthew Paterson and Johannes Strippel, 'My Space: governing individuals' carbon emissions' (2010) 28 *Environment and Planning D: Society and Space* 341.

Vernon Smith, however, contests the argument that optimal market outcomes can be achieved only by ‘conscious cognition’.³⁷ Smith demonstrated through his laboratory experiments (where unlike his predecessors, he sought to mimic the rules of real-world institutions) that the level of information or intelligence is irrelevant for the purpose of arriving at rational economic decisions given a laboratory replication of actual institutional rules and design.³⁸ If Smith’s logic is to be applied to the EET, albeit with caution, then one could entertain the intuition that notwithstanding the levels of information or biases, a properly functioning market for individual carbon allowances would lead to efficient outcomes.

Obviously, we cannot comment on whether Smith’s view applies to end-user emissions trading without evidence, or at least without a specifically designed simulation. It would, however, be useful to gauge the level of end-user engagement required from the feedback and attitudes of those participating in CRAGs. From these interviews, there appears to be a positive attitude regarding a learning curve which develops due to continual engagement.³⁹ While some individuals prefer a common accountant to take care of calculations, choices and decisions are made by individuals. Interestingly, such engagement appears to stimulate effectiveness and efficiency as people undertake a more intensive search for emission reduction opportunities, which in turn may lead them to discovering and taking advantage of lower cost emissions opportunities. This line of reasoning provides an impetus for further research on both field and laboratory experiments on whether actual exposure to analogous markets or simulated exposure to carbon markets would lead to more effective engagement and an economically efficient system.

B. Regulating Offset Markets

The desire of people to contribute to mitigating climate change has been capitalized by a still relatively small, yet fast growing voluntary carbon

³⁷ Vernon Smith, ‘Rational Choice: the contrast between economics and psychology’ (1991) 99 *Journal of Political Economy* 877.

³⁸ *Ibid*, p. 887.

³⁹ Howell, ‘Living with a carbon allowance’, *supra*, p. 250.

market.⁴⁰ In this market, individuals voluntarily pay to offset their pollution, for instance by letting some entrepreneur planting trees for them. The participants in regulated (or compliance) markets have largely been firms; in the case of the EU ETS certain sectors have been identified and allocations have been done at a national level accordingly. The participants in these markets, however, have not been confined to those firms (or installations, however defined) that have been allocated allowances, but also non-account holding traders such as investment banks which have been transacting in the EU ETS. The reason could be that, given the transaction costs associated with the trading of such allowances, agents such as financial institutions are preferred. In addition, given that these markets are profitable for mediators such as brokers or investments banks, there may be incentives for firms to invest without being obligated to do so. This may explain why there are also several burgeoning voluntary carbon markets, where the participants are also individuals, in addition to firms.⁴¹

However, such voluntary markets have been referred to as ‘cowboy markets’ due to the absence of common standards and regulations. There are also perverse incentives in the voluntary offset markets for producers and providers of climate-friendly goods and services that can lead to ineffective ‘green’ activities.⁴² A regulated EET scheme involving end-users may facilitate better engagement with such markets due to harmonized/standardised certification, provided there is an opportunity for such markets to be linked. In the event there is no framework which facilitates linking, then there would be no incentive for sellers and suppliers to follow such standardised technical, contractual and accounting certification. Further, standardized certification in the EET may also help overcome the problem of price volatility⁴³ attached to

⁴⁰ Molly Peters-Stanley et. al., *State of the Voluntary Carbon Market 2011*, (New York: Ecosystem Marketplace and Bloomberg Energy Finance, 2011).

⁴¹ Ibid.

⁴² There have been cases of misleading advertising and ‘greenwashing’ in the US and Australia. For example, see Eric L. Lane, ‘Consumer Protection in the Eco-mark Era: A Preliminary Survey and Assessment of Anti-Greenwashing Activity and Eco-mark Enforcement’ (2010) *John Marshall Review of Intellectual Property Law*, 2415.

⁴³ Marc N. Conte and Matthew Kotchen, ‘Explaining the Price of Voluntary Carbon Offsets’ (2009) NBER Working Paper 15294 [Available at: <http://www.nber.org/papers/w15294.pdf>]

credits generated from different offset programmes which makes fungibility (or interchangeability with other equivalent individual goods/assets of the same type) difficult. In addition to the benefits of standardised certification, linking has the potential to make the market thicker by enhancing liquidity and therefore introducing a higher potential for reducing costs.

Theoretically, the issue of linking emissions credit markets is not new as even the EU ETS is linked to uncapped offset markets: certified emissions reduction (CERs) as offset credits generated through the Clean Development Mechanism (CDM)⁴⁴ and Emission Reduction Units (ERUs) from Joint Implementation projects can now be used by each installation subject to a country specific limit, to cover its emissions. However, by allowing offset-linking, there is the difficulty of a potential superfluity of allowances that depress carbon prices and encourage further emissions. In this regard, it may be noted that the primary reason behind setting limits to the number of offsets that can be traded in the EU ETS is to fulfill the ‘supplementarity condition’ laid down in Article 12 of the Kyoto Protocol⁴⁵ where CERs should only be used to achieve only part of the overall mitigation effort. The Linking Directive⁴⁶ implements this condition as primary abatement should happen in the EU, i.e. there is an element of *regional effectiveness* of environmental policy. Unlike international offsets, an EET would satisfy the supplementarity condition as the reductions would be happening within the EU. This leaves us with the problem of the quantity and price effects that offsets from different sources may have on EU ETS allowances. In a recent paper, Vasa argues that CERs trade at a discount to allowances, and this price spread creates a ‘rent’ since such credits can be converted to allowances. This rent is, of course, higher for those countries with a higher limit for offset trading, the distribution or control of which must be guided by regulation.⁴⁷ The suggestion put forward

⁴⁴ The legal basis for the Clean Development Mechanism and Joint Implementation is Article 12 of the Kyoto Protocol, operating under the United Nations Framework Convention on Climate Change, 1992.

⁴⁵ Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 22

⁴⁶ EU Linking Directive EC 2004/101, 2004 O.J. (L338) 18-19

⁴⁷ Alexander Vasa, ‘Implementing CDM Limits in the EU ETS: a Law and Economics approach’ (2011) *DIW Discussion Paper* 1032, Berlin

for maintaining stability and reducing rents is by either auctioning CER usage certificates, or for the regulator to pre-sell allowances in the amount equal to the CDM limit (primarily because of the uncertainty inherent in CER project delivery relative to allowances) and subsequently buying CERs. With regard to controlling the quantity of offsets which can have a price effect on the EU ETS, a regulatory ‘ratchet’ could be developed whereby any over-allocation could be clawed back or retired. However, more research into its effects is needed.

C. Capping Uncapped Sectors

In spite of the uncertainty regarding ways to deal with climate change, there has been a robust market-based regulatory reaction to mitigation internationally, with the EU ETS being the poster-boy for an effective response. While the EU ETS has also been criticised,⁴⁸ if only for the modest and short-term emission reduction targets it imposes, whereas some commentators have favoured a carbon tax,⁴⁹ it has nonetheless been quite a successful experiment as is evidenced by the absolute emission caps that have been imposed on major industries, the high compliance rates with those caps, and the acknowledgement by a majority of company managers that the EU ETS has caused them to reduce emissions.⁵⁰ The EU ETS (governed by Directive 2003/87/EC)⁵¹, even with the revised rules as of 2013, has a limited number of sectors within its scope, and approximately 12,000 installations (comprising combustion and energy-intensive manufacturing activities) within such sectors identified in Annex

⁴⁸ See for example Paul Collier, *The Plundered Planet: How to Reconcile Prosperity with Nature* (Oxford: Oxford University Press 2010), p. 177; Thomas Spencer and Emmanuel Guerin, ‘Time to Reform the EU Emissions Trading Scheme’ (2012) 23 *European Energy Review* 23 January 2012.

⁴⁹ Shi-ling Hsu, *The Case for Carbon Tax: Getting Past Our Hang-ups to Effective Climate Policy* (Washington DC: Island Press, 2011).

⁵⁰ Thomson Reuters Point Carbon (2011), *Carbon 2011*, available at: http://www.pointcarbon.com/polopoly_fs/1.1545244!Carbon%202011_web.pdf

⁵¹ Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme For greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, 2003 O.J. (L 275) 32

I of EU ETS. Thus, the percentage of total emissions covered under these sectors can certainly be enhanced if more sectors are included. From the table below developed by the European Environmental Agency (EEA), we can see the percentage distribution of emissions from different sectors within the EU:

Sector	%
1. Public Electricity and Heat Production	27.8
2. Transport	19.5
3. Manufacturing Industries and Construction	12.7
4. Agriculture	9.2
4. Industrial Processes	8.5
6. Residential	8.5
7. Commercial/Institutional	3.3
8. Waste	2.8
9. Petroleum Refining	2.7
10. Fugitive Emissions from Fuels	1.7
1.1. Agriculture/Forestry/Fisheries	1.5
12. Manufacture of Solid Fuels and Other Energy Industries	1.4
13. Solvent and Other Product Use	0.2
14. Other (Not elsewhere specified)	0.2
Total	100.0

Source: EEA (2010)

Though there is some flexibility under the amended ETS Directive (2009/29/EC)⁵² to include additional sectors, the emissions from some sectors such as agriculture, waste, residential and transport (other than aviation) are uncapped. For some of these sectors, the EU has set national targets (the so-called 'Effort Sharing Decision'),⁵³ but cap-and-trade is not used as an instrument to implement these targets. The Commission has also expressed interest in pricing emissions in other sectors.⁵⁴ In a recent report, the European Environment Agency observes that if indirect emissions by households were to be included

⁵² Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community, OJ L 140, 5.6.2009

⁵³ This is done by the Effort Sharing Decision. Decision No. 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020, OJ L 140/136. It is the successor to the so-called Burden sharing decision (Council Decision 2002/358/EC, OJ L 130/1).

⁵⁴ Council of the European Union, 'Council conclusions on review of the European Union emissions trading scheme' (2007) *12th Environment Council meeting*, Luxembourg, 28 June 2007.

within total emissions, then the numbers presented in the table above would be significantly altered, to establish a substantially greater contribution of the residential sector to emissions.⁵⁵ However, requiring the end-user to be responsible for indirect emissions would require a calculation of embodied carbon in all purchases and activities, which is not an easy proposition. Even without the revised figures of indirect emissions, it is difficult to imagine how the EU and its member states can meet their emissions reduction targets if emissions would rise (or continue at the current rate) in the uncapped sectors.

The issue of expanding abatement opportunities is a contentious one, as the PCT variants cover household fuel and energy use within its scope. There have been debates in Australia recently about whether agriculture could be brought within the ambit of its national ETS. There are several activities which could be undertaken by farmers to facilitate a large amount of reductions: cropland management, grazing land management, the restoration of degraded soils, and sink enhancement (carbon sequestration). Further, agriculture has the interesting problem of being affected by climate change, which has prompted substantial funding of adaptation activities.⁵⁶ While the economic relationship between mitigation and adaptation is a complex yet interesting question, in some circumstances, a single activity could yield complementary benefits for both purposes. The primary reason given for not including agriculture in an ETS is the uncertainty involved in the measurement of emissions of methane (from cattle) and nitrous oxide (direct and indirect soil emission) due to the changing parameters of biological processes.⁵⁷ Brandt and Svensen interestingly argue that it is not necessary to measure such emissions directly to incentivize reduction in emissions by farmers; what is necessary is to calculate the (average) change in emission from a baseline practice to a new practice

⁵⁵ European Environment Agency, 'End-user GHG emissions from Energy: Reallocation of emissions from energy industries to end users 2005–2009', *EEA Technical Report Number 19*, December 2011.

⁵⁶ Jørgen E. Olesen and Marco Bindi, 'Consequences of climate change for European agricultural productivity, land use and policy' (2002) 16 *European Journal of Agronomy* 239.

⁵⁷ Jane M.F. Johnson et. Al., 'Agricultural Opportunities to mitigate greenhouse gas emissions' (2007) 150 *Environmental Pollution* 107.

with respect to agricultural activities.⁵⁸ Given that not all farming practices and activities may be effective, a regulator could either exhaustively specify what practices should be accepted as valid reduction measures, or alternatively exclude practices that yield uncertain results.⁵⁹

In the Brandt and Svensen system, such reduction from a particular activity or practice can be calculated annually and would be the basis of a trading system in which farmers could choose those activities where marginal reduction cost would be lowest. It is suggested that 'permits' could be grandfathered to farmers by calculating emission levels from 'a source' at the beginning of a year and an excess or deficit of allowances can be sold or bought respectively before surrendering.⁶⁰ Although making this trading system part of the EU ETS has been suggested, the mechanism for doing so is not clear. The difficulty may arise in (a) identifying all these non-point sources, (b) choosing a method of allocation that would not be equal allowance per capita (given the uneven distribution of resources for different sectors) while also the (c) price effect on the ETS must be taken into account. However, it may be noted that the awarding of credits on an incremental basis according to abatement, as discussed in relation to agriculture above, has been mentioned in the literature as a general solution for non-point sources of emissions.⁶¹ Here the problem is that this could amount to a 'credit trading' system based on (relative) emission standards for polluters which is known to be less effective and less efficient than a 'permit trading' scheme with (absolute) emission caps for the emitters.⁶² However, what is clear is that there is certainly a qualified case to be made for engaging end-user farmers in an emissions trading system as it would incentivize 'green' investments and stimulate cost-effectiveness.

⁵⁸ Urs Steiner Brandt and Gert Tinggaard Svendsen, 'A Project-based system for including farmers in the ETS', (2011) 92 *Journal of Environmental Management* 1121.

⁵⁹ Ibid

⁶⁰ Ibid, p. 17

⁶¹ Yacov Tsur and Harry de Gorter, 'On the Regulation of Unobserved Emissions' (2011), Discussion Paper No. 2.11, the Center for Agricultural Economic Research, Hebrew University of Jerusalem.

⁶² Andries Nentjes and Edwin Woerdman, 'Tradable Permits versus Tradable Credits: A Survey and Analysis' (2012) 6 *International Review of Environmental and Resource Economics* 1.

It would be incorrect to say that emissions from transport are not priced in the EU. It is done on a piecemeal basis in some Member States by gasoline taxes ranging from 0.60 €/l (Luxembourg) to 1.25 €/l (Hungary).⁶³ Further, EU emissions standards for vehicles have been adopted in many some countries.⁶⁴ However, emissions from road transport are increasing at an increasing rate and for that reason, more stringent measures such as harmonised taxes or restrictions on vehicles that run on diesel or petrol may be warranted.

D. Energy Efficiency through the Backdoor?

Intuitively, saving energy and fuel at the residential level doubles up as both mitigation and energy-efficiency. While no comprehensive EU-wide study has been conducted to verify this relationship, national studies do point to co-benefits, especially with regard to the schemes adopted in Britain.⁶⁵ End-users would receive a more direct, visible and ‘hands-on’ incentive to reduce energy consumption. This is likely to have an impact on climate policy acceptance and energy conservation behavior: recent research suggests that law, via instrument choice and its institutional design, is actually able to change the ‘environmental mind’.⁶⁶ However, the institutional interaction between the two may not be that simple. An example of a possible conflict in institutional interaction was observed⁶⁷ in 2011 when the Directorate General of Climate Action and the Directorate General of Energy Savings appeared to have different opinions about the efficacy of emissions reductions by way of mitigation through the EU ETS Directive and energy efficiency through

⁶³ Thomas Sterner, ‘Fuel Taxes: An Important Instrument for Climate Policy’ (2007) 35 *Energy Policy* 3194.

⁶⁴ Council Directive 80/1268/EEC of 16 December 1980 on the approximation of the laws of the Member States relating to the fuel consumption of motor vehicles, *OJ L* 375, 31.12.1980, p. 36–45

⁶⁵ Luis Mundaca and Lena Neji, ‘A multi-criteria evaluation framework for tradable white certificate schemes’ (2009) 37 *Energy Policy* 4557.

⁶⁶ Yves Feldman and Oren Perez, ‘How Law Changes the Environmental Mind: An Experimental Study of the Effect of Legal Norms on Moral Perceptions and Civic Enforcement’ (2009) 36 *Journal of Law and Society*, 501.

⁶⁷ http://www.euractiv.com/energy-efficiency/brussels-disarray-energy-directive-news-505654?Utm_source=euractiv%20Newsletter&utm_campaign=3e98b1508emy_google_analytics_key&utm_medium=email.

a proposed Energy Efficiency Directive⁶⁸ respectively. The issue was that efficiency measures may cancel out the need for as many pollution permits, thus lowering the price of carbon in the EU ETS market, which was suffering from an excess of allowances brought about primarily by the recession. While this issue is not resolved, and goes back to the question of how to control the number of allowances in the EU ETS, another way of examining this institutional interaction is by analysing the instruments that facilitate such interaction at a micro-level.

A market-based energy efficiency measure that has been considered in the EU is the use of white certificates.⁶⁹ White certificates are records of energy-efficiency and may be traded nationally in countries that have them (currently Italy, France and the UK). They are used in combination with an obligation scheme whereby market actors (retail energy suppliers or distributors for France and Italy, households in the UK) are obliged to achieve a certain amount of end-use energy saving among customers (usually a percentage of the sales measured in physical terms).⁷⁰ In order to be eligible for receiving white certificates, obligated parties need to demonstrate that there are savings in energy end-use beyond a baseline, or additional to business-as-usual. The relationship of white certificates with the EU ETS is complex, with regard to both schemes operating in parallel as well as with respect to the fungibility of allowances and certificates. Sorrell and a couple of other economists have been rather sceptical of such interaction, arguing that their co-existence would not result in an efficient reduction in emissions from electricity use, unless there is a tightening of the EU ETS cap.⁷¹ In view of this difficulty, it is tempting to argue that, given energy-saving targets in the EU, a pan-EU EET system could be the preferred alternative incentive mechanism to white certificates for achieving energy efficiency by engaging the end-user. However,

⁶⁸ Proposal for a Directive on energy efficiency and repealing Directives 2004/8/EC and 2006/32/EC [COM(2011)370, 22/06/2011].

⁶⁹ Martha Roggenkamp and Ulf Hammer (eds), *European Energy Law Report IV* (Oxford: Intersentia, 2007).

⁷⁰ Nicola Labanca and Adriaan Perrels, 'Tradable White Certificates—a promising but tricky policy instrument' (2008) 1 *Energy Efficiency* 233.

⁷¹ Steve Sorrell et. al., 'White certificate schemes: Economic analysis and interactions with the EU ETS' (2009) 37 *Energy Policy* 29.

without discounting the role which an EET could play in energy savings, it is necessary to chart out the conditions where allowances and certificates could be fungible, without causing a problematic price effect due to an over-supply of units.

Keeping the above purposes that an EET may serve in mind, we now proceed to examine some principles that could provide guidance on how such a scheme could be put into effect.

IV. HOW IS SUCH A SCHEME TO BE DESIGNED?

Given that the market is supposed to govern the prices of allowances and correct mis-allocation in the EU ETS, the establishment and operation of the scheme is nonetheless heavily dependent on regulation. Thus, the EU ETS has been characterised as creature of design⁷² with aspects such as emission cap, time period, interaction with other schemes and instruments, eligibility to trade, registration, monitoring, verification, enforcement, and penalties all specified by way of regulation. Similar design facets would characterize an EET scheme as well, but we concentrate below on the principles that would inform the design of such a scheme. Normally, assessment of an environmental policy is done by examining whether it is equitable, efficient and effective. While these factors will be touched upon, we would also like to address the issue of integration with the EU ETS and the legal framework for such a system.

A. Equity and Justice Considerations

Institutional mechanisms for dealing with climate change have always raised questions of equity and justice. The question who-pays-how-much and whether per-capita allocation is the best way forward has been at the heart of international and regional climate negotiations.⁷³ Given that the success of an EET system would depend on the engagement of people and communities, such questions attain even greater prominence. For example, Starkey assesses design variants of PCT schemes and its alternatives against the yardsticks of

⁷² For an overview of the regulatory aspects of the ETS see Martha M. Roggenkamp and Ulf Hammer ed. *European Energy Law Report VII* (Oxford: Intersentia, 2010).

⁷³ Eric A. Posner and Cass R. Sunstein, 'Should greenhouse gas permits be allocated on a per-capita basis?' (2009) 97 *California Law Review* 51.

equity, efficiency and effectiveness. In this regard, an equal per-capita allocation (which schemes such as cap-and-share or the Finnish proposal do not afford) is a favourable option owing to the long-term benefits of engaged individual participation as well as the reduction of implementation and participation costs owing to such engagement.

Interestingly, the effectiveness and efficiency of the system, such as the lowering of abatement costs by continuous rational engagement depends on whether the system is perceived as fair.⁷⁴ In an online survey conducted by the Institute for Public Policy Research (IPPR), around 70% believed that an equal per capita allocation under the PCT “would be unfair because some people need more carbon credits than others”.⁷⁵ Such need in relation to household and transport energy use may arise from a host of circumstances: old people may have to use motorised transport and people living in colder climates may require more heating, for instance. Hyams argues that the best way of dealing with this situation is to initially distribute allowances equally, and to subsequently allocate more to applicants who can make specific cases for more allowances “on the grounds of their unchosen exceptional circumstances”.⁷⁶ The problem with this suggestion is the requirement to determine criteria for ‘unchosen exceptional circumstances’ and to assess applications filed thereunder on a case-by-case basis. Modifying allowance allocations to correct for distributional inequities is also an approach that has been contrasted against financial compensation (a subsidy) to low-income households in the UK by researchers at the Centre for Science and Environment.⁷⁷ The conclusion reached was two-fold. First, the method of modification by way of exception is preferable and correcting to a certain extent as it reduces the deficit of allowances by households having certain ‘losing’ characteristics (rurality, number of children, age of allottees, built

⁷⁴ Richard Starkey, ‘Personal Carbon Trading: a critical survey. Part 2: efficiency and effectiveness’ (2012) 73 *Ecological Economics* 19.

⁷⁵ J. Bird and Mark Lockwood, ‘Plan B? The prospects for personal carbon trading’ (2009) *Report by Institute for Public Policy Research*, Oxford.

⁷⁶ Keith Hyams, ‘A Just Response to Climate Change: personal carbon allowances and the normal-functioning approach’ (Summer 2009) 40 *Journal of Social Philosophy* 237, p. 248.

⁷⁷ Vicki White and Joshua Thumim, ‘Moderating the distributional impacts of personal carbon trading’ (2009), *Report to the Institute of Public Policy Research*, CSE, Oxford

form, central heating type). Second, the method is information intensive and may also encourage perverse incentives to increase emissions as applicants could inflate their emissions to obtain additional allowances.

Due to the proposed scope of the EET, additional questions may be raised about distribution across sectors and locations. With respect to the latter, Fawcett raises the question as to whether the acceptability and success of the PCT would be influenced by national characteristics.⁷⁸ With regard to distributional effects, she argues that the importance given to equity in policy-making may be less considerable in countries with lower income inequality and concerns about fuel poverty.⁷⁹ Further, lower regional variation in energy demand, access to greener transport modes and wide access to less carbon-intensive fuels are seen as national characteristics favourable to a PCT.⁸⁰ From the discussion above, it could be argued that notwithstanding income levels and fuel poverty, an EU level modified distribution system could identify and correct for characteristics that result in inequitable allowance deficits/surpluses.

In relation to other sectors under the EET, countries with larger potential for deforestation, land-use changes, and community or municipality waste treatment may benefit more, provided the system of allocation is addressed. As discussed earlier, such sectors may be capped, EU approved national targets set, and, taking a cue from the TEQ proposal of combining grandfathering and auctioning, allowances could perhaps be auctioned in such sectors. We hypothesise that such a system for sectors such as agriculture and waste treatment would incentivise collective action, whether through community engagement such as CRAGs or even local government institutions such as municipalities. Overall this system appears to be efficient and effective. Following Starkey, a TEQ-equivalent auctioning component has low implementation costs as the revenue from the auctions can be easily allocated by making adjustments to pre-existing distortionary taxes. The difficulty could be high participation costs, such as a substantial investment of time and upfront resources for the

⁷⁸ Tina Fawcett, 'Personal Carbon Trading in Different National Contexts' (2010) 10 *Climate Policy* 339.

⁷⁹ Ibid, p. 344.

⁸⁰ Ibid, p. 347.

auctioning.⁸¹ The agency costs which are normally incurred to reduce such participation costs may be moderated by way of collective action. Further research needs to be conducted to confirm whether this proposal might work, in terms of economic feasibility, political acceptability and assessments (simulated or otherwise) of public engagement.

The next question that needs to be settled is whether an EET would be integrated into the ETS or would be a separate scheme in itself.

B. The Issue of Integration

A pan-European EET scheme would require policy intervention at an EU level, thus requiring collective action by member states. From an economic point of view, integrating it with the EU ETS would avoid the risk of unpopularity which may arise in a parallel system where allowance prices could exceed those paid by businesses in the EU ETS.⁸² The effectiveness of the EU ETS by adding additional sectors as it stands now may increase, not only by imposing emission caps, but also by reducing price instabilities caused by the concentration on fewer sectors. Lockwood observes that the benefit that a PCT scheme can confer upon the EU ETS may be contested in areas where they both cover the same sector ('double counting'), such as electricity, due to the possibility of encouraging higher emissions in the EU ETS if the PCT is successful and exerts a downward pressure on the EU ETS carbon price.⁸³ He suggests that the way around this problem is to identify abatement opportunities not captured by the EU ETS such as those in other sectors. We would like to add that an EET scheme which is wide in geographical and sectoral scope would deal more effectively with this problem by way of a single cap and monitoring system. Multiple national prices in sectors that fall under different policy schemes would only add to the uncertainty. What needs to be explored, as was evident in the discussions around voluntary offsets and white certificates, is whether (and, if so, how) to effectively introduce a 'soft price cap (and/or floor)' by allowing for a contingent addition or retirement of

⁸¹ *Supra*, pp. 19-20

⁸² Matthew Lockwood, 'The Economics of Personal Carbon Trading' (2010) 10 *Climate Policy* 447-461.

⁸³ *Ibid*, p. 449.

permits, and possibly even regulating their flow. Some authors have suggested that an EU ETS ‘Central Bank’ is the best way to deal with this situation,⁸⁴ while others caution against the short-run inefficiencies that will arise from carbon price interventions.⁸⁵

C. Choosing an Enforcement Mechanism

Eyre argues that one of the key issues related to design of a PCT scheme is enforcement.⁸⁶ Enforcement includes aspects of implementation such as surrender, monitoring and verification which are the key determinants of efficiency and effectiveness of a proposed scheme, and in this context, was a major reason (in addition to public acceptability) why discussions around the PCT were halted in the UK.⁸⁷ For a downstream approach, the administration costs are considered to be too high as every end-user would need to be monitored, and enforcing surrender of allowances would be difficult. Individual carbon accounts would need to be monitored, and a penalty imposed where such accounts contain inadequate allowances, thus ‘turning half the world’s population into carbon police.’⁸⁸ Contrary to an exclusively downstream approach, in relation to household and personal transport fuel consumption, a downstream system which directly incorporates firms as well as households and car drivers can be administratively feasible by concentrating the monitoring activities as much as possible on the level of fossil fuel producers and importers (upstream) and by using a generic allocation criterion and chipcard technology for households and car drivers (downstream).

⁸⁴ Christian de Perthuis, ‘Carbon Markets Regulation: the case for a CO2 Central Bank’ (2011) *Information and Debate Series, Carbon Markets and Prices Research Initiative, CDC Climat*; available at: [http://www.chaireconomieduclimat.org/wp-content/uploads/2011/09/11-09-12-Cahier-ID-n10-De-Perthuis-market-regulation.pdf](http://www.chaireeconomieduclimat.org/wp-content/uploads/2011/09/11-09-12-Cahier-ID-n10-De-Perthuis-market-regulation.pdf).

⁸⁵ Christian Egerhofer et al, ‘The EU Emissions Trading System and Climate Policy towards 2050: Real incentives to reduce emissions and drive innovation?’ (2011) *CEPS Special Report*, Centre for European Policy Studies, Brussels.

⁸⁶ Nick Eyre, ‘Policing Carbon: design and enforcement options for personal carbon trading’ (2010) 10 *Climate Policy* 432.

⁸⁷ DEFRA, ‘Synthesis Report on the findings from Defra’s pre-feasibility study into personal carbon trading’ (2008), Department for Environment, Food and Rural Affairs, London.

⁸⁸ Eyre, ‘Policing Carbon’ *supra*, p. 439.

The proposed upstream-downstream hybrid model for households has been proposed by Woerdman and Bolderdijk,⁸⁹ and it may be briefly described as follows: For every unit of fossil fuel a firm or household purchases from distributors, it has to hand over a corresponding number of carbon allowances. Distributors, in turn, can only obtain fuels from their suppliers in exchange for carbon allowances. In this way, all allowances will end up in the hands of producers and importers of fuel, including the allowances purchased by distributors to cover their fuel supply to consumers and other small users. Producers and importers of fuel are placed under the obligation to turn over to the environmental authorities carbon allowances for the carbon contained in the fossil fuels they have sold on the market.

Although the above is mostly self-enforcing, it may not be applicable to all sectors. A similar system with slight variations may be adopted for other sectors such as agriculture. As per the Finnish Proposal discussed earlier, it is at the retailer level at which enforcement takes place. The same logic could be extended for the agricultural sector. Monitoring and enforcement can take place upstream, perhaps at a retail level, or even at the point of taxation of the goods and land under question. However, agriculture may entail more administrative costs owing to the determination of criteria eligible for allowances. It could also be argued that for sectors such as waste, it is municipalities that could be the point of enforcement, thus reducing heavy administrative costs.

While it is possible to reduce implementation costs by way of the downstream trading and upstream monitoring, the issue of penalty still remains unclear. The EU ETS functions under the pain of a penalty in the event that the number of allowances that need to be surrendered are not enough. For an EET scheme, while a penalty on the upstream mediators may be imposed, an opt-out into a taxation system may be a better alternative. Although the debate between the suitability of an emission tax and that of an emissions trading system is an old one, it is not spent, and not clearly resolved. Raux and Marlot, in their study on methods of reducing fuel consumption used

⁸⁹ Edwin Woerdman and Jan Wilem Bolderdijk, 'Emissions Trading for Households? A Behavioral Law and Economics Perspective' (2015) *European Journal of Law and Economics* 1.

for personal transport, suggest that consumers should be allowed to choose their preferred policy.⁹⁰ Thus, the suggestion is to allow a ‘tradable fuel permit’ scheme and a carbon tax to be introduced simultaneously, where anyone owning a vehicle could opt into the permit scheme, receive free allowances and avoid paying the carbon tax till the permits are used up. To continue refraining from paying a tax, additional permits would need to be purchased. Unfortunately, as far as we know, there is no precedent for an opt-in market mechanism to avoid paying a tax but it has the potential to be tested in a long-term field experiment. Following from the success of policies such as default organ donation, a variation on the ‘opt-in’ model for the EET scheme could be an ‘opt-out’ system where individuals would be allocated allowances by default, and would be given the choice to opt out of them by paying a tax.

V. LEGAL FRAMEWORK

While this chapter in general discusses the possibility of an EET scheme largely from a regulatory perspective and considers issues which are pertinent to its general framework, this section concentrates more on the rights that may be available to the end-user participant in such a scheme.

A. Defining different instruments

Though there is a temptation to use the terms ‘credits’, ‘permits’ and allowances interchangeably, the literature on the EU ETS has identified distinctions between them, often from an efficiency perspective.⁹¹ From a legal point of view, a clear identification of property rights embedded in and derived from such instruments is imperative, given the various commercial uses of emissions allowances and the existence of secondary, derivatives and futures markets around them. Romania, for instance, created a stir in this regard by characterizing a carbon allowance as a financial instrument.⁹² This sparked off an inquiry by the European Commission as to whether an allowance under

⁹⁰ Charles Raux and Gregorie Marlot, ‘A system of tradable CO₂ permits applied to fuel consumption by motorists,’ (2005) *Transport Policy* 255.

⁹¹ Nentjes and Woerdman, ‘Tradable Permits versus Tradable Credits’, *supra*.

⁹² “Romania has classified carbon allowances as financial instruments, threatening over-the-counter carbon trade in the country”, *Carbon Market News*, February 24, 2010.

the EU ETS can be considered as such,⁹³ with the conclusion that allowance derivatives are recognized as financial instruments under the EU Markets in Financial Instruments Directive (MiFID).⁹⁴ However, the legal status of allowances in primary markets, spot markets and as security instruments is not fully clear. Some commentators have argued that an EU ETS allowance is an ‘investment credit’ under international law, raising questions about fair and equitable treatment of investors.⁹⁵ It appears that the characterization of a carbon unit is related to its functionality, and given that the functionality of carbon units has been determined largely by the markets in which they are traded, they tend towards being viewed as commodities. On the other hand, a carbon unit does contain certain facets of a currency, the primary one being that unlike a commodity, its value is derived only from its use to meet an obligation.⁹⁶ Further, the implementation of a PCT has been envisaged as a currency where ‘carbon points’ are sacrificed along with normal currency for fuel and energy use. However, Brohe criticizes characterizing a carbon unit as currency as it does not assist with the proper identification of the property rights therein.⁹⁷ Button, on the other hand, argues that a ‘currency model’ is preferable to a ‘commodity model’ for international carbon markets, as governments could then maintain control on price volatility, promote transparency and have an international supervisory body.⁹⁸ We have observed earlier that for an EET scheme, there may be a need for central supervision (by way of a carbon central bank, for example) of allowances, and in a pan-

⁹³ http://ec.europa.eu/clima/news/docs/discussion_paper_en.pdf.

⁹⁴ “Review of the Markets in Financial Instruments Directive (MIFID) and Proposals for a Regulation on Market Abuse and for a Directive on Criminal Sanctions for Market Abuse: Frequently Asked Questions on Emission Allowances”, EU MEMO/11/719, October 20, 2011. Available at: <http://europa.eu/rapid/pressreleasesaction.do?Reference=MEMO/11/719>.

⁹⁵ Lisa Bennett, ‘Are Tradable Carbon Emissions Credit Investments? Characterizations and Ramifications under International Investment Law’, (2010) 85 *New York University Law Review* 1581.

⁹⁶ Jillian Button, ‘Carbon: Commodity or Currency? The Case for an International Carbon Market Based on the Currency Model’ (2008) 32 *Harvard Environmental Law Review* 571, p. 580.

⁹⁷ Arnaud Brohe, ‘Personal Carbon Trading in the context of the EU Emissions Trading Scheme’, (2010) 10 *Climate Policy* 462, p. 471.

⁹⁸ Button, ‘Carbon’, *supra*.

EU system, there is certainly a need to maintain exchange arrangements. However, a standard commodity standing-in for a certain amount of carbon with clearly defined rights as to how it may be traded is also advantageous. Thus, there appears to be a case for a regulatory mechanism that invests in a mixed-system. A broader regulatory perspective would require additional considerations regarding the nature of the instrument, taking into account concerns of equity, scope for misuse, and transaction costs.

B. Voluntary Markets and Ex-Post Enforcement

In relation to voluntary markets, some commentators have pointed out that it is incorrect to group all voluntary markets as unregulated markets, as some of them are regulated to a certain extent by way of the investment rules set forth by the different trading platforms.⁹⁹ However, the suggestion that those actors investing in the voluntary market and the agents facilitating such investment would transpose such behaviour onto a regulated EET market requires careful deliberation. From a BLE perspective, there is the possibility of a motivational and regulatory crowding-out. Regulatory crowding-out involves a regulation crowding-out other more effective governance structures (private or otherwise), while motivational crowding-out refers to a situation where an external incentive may crowd-out internal motives (usually moral) for certain behaviour. If this problem of 'dual crowding out' can be corrected, or may not prove to be insurmountable, then there is the possibility that sustainably inclined individuals and stakeholders of voluntary markets may benefit from an EET scheme.

In addition to an *ex-ante* regulatory framework, there is also a need for recourse to a legal mechanism for settlement of disputes. However, this suggestion is not axiomatic; if an allowance is characterized as currency, there may not arise any need for a specific framework for settlement of disputes or protection of property rights. Again if it is characterized as a commodity, then regulations at an EU and national level dealing with commodity trade may be considered sufficient. At any event, it is submitted that there is scope for

⁹⁹ Richard Benwell, 'Voluntary Aspects of Carbon Emissions Trading', (2009) 66 *International Journal of Environmental Studies* 605.

unfair trade practices and application of consumer law in general to protect the interests of the end-user. This may be especially relevant in the context of the EU ETS as the CJEU has ruled that private parties have no standing before it to challenge allocations of allowances, which is a matter of executive and national prerogative.¹⁰⁰ It is submitted that the absence of an ex-post enforcement mechanism would lead to uncertainty and a lack of trust in such a system. Following some cases on eco-labelling¹⁰¹ and misleading offset information¹⁰² in common law countries, an argument could be made for the private enforcement of environmental law within the EU by way of consumer protection against carbon goods and services. Eyre observes that a PCT scheme would involve vulnerable consumers who may be taken advantage of by financial mediators, such as being led into selling allowances at below their market value.¹⁰³ The issue of perverse incentives is a considerable economic problem and consumer law would therefore be equally applicable to an EET scheme as it is to voluntary carbon markets and energy-efficiency markets.

2

VI. WHEN COULD WE SEE SUCH A SCHEME BEING TRANSLATED TO POLICY?

Political and public acceptability would be vital if an EET scheme of the type we call for is to be implemented and to become established as a mechanism for responding to risks of climate change. Insights from Behavioral Law and Economics may help to identify the proper conditions.

A. Political Acceptability

As indicated earlier, the UK has been quite interested in a PCT system at a policy level. David Miliband had expressed his interest in 2006, and this has been followed by work conducted and commissioned by DEFRA. While

¹⁰⁰ Case T-16/04 *Arcelor SA v European Parliament and Council of the European Union* [2004/C 71/64]

¹⁰¹ For a review of American cases see Lane, 'Consumer Protection in the Eco-mark era', *supra*.

¹⁰² *Australian Competition and Consumer Commission v GM Holden Ltd* (2008) FCA 1428 is the most notable case in this regard; for a short review, see Glen Wright, 'Carbon Offsets and Consumer Protection' (2010) 90 *IMPACT!* 12.

¹⁰³ Eyre, 'Policing Carbon', *supra*.

both DEFRA as well as the House of Commons' EAC have considered the proposal positively and found it technically feasible, they have deferred implementation till there is further research on acceptability and lowering of costs.¹⁰⁴ To our knowledge, no other member state of the EU has expressed a clear political will to extend emissions trading to the end-user. The reasons are not clear, and we are currently in the process of consolidating the opinions of policy makers in the EU in relation to such a scheme. The intention is to consolidate the considered opinions of member-state representatives on the feasibility of the EET scheme, and views on public acceptability.

Other than national acceptability, there is the issue of acceptability at the EU level. Drawing from the historical difficulties in the EU member-states with arriving at an agreement about a common carbon tax, Fawcett opines that a uniform personal carbon allowance system for all EU citizens would be unlikely. Instead a system of national allocation of emission rights within EU-agreed national carbon budgets may be accepted.¹⁰⁵ She further suggests that the issue of tradability may not be viewed favourably. Picking up from Fawcett, it could be argued that a policy option which may be politically acceptable would be a national sectoral budget for different sectors that may come under the ambit of the EET, and the setting of caps on such sectors. In addition, an EU limit on offsets from 'soft-capped' sectors may be permitted within such a scheme. In this way, the EET could be aligned with the ETS, and may not require significant policy changes. The issue of consensus on allocation of allowances requires consideration of some other factors. Parag and Eyre map some of the institutional, social and political factors that would be brought into play for the PCT to become policy. They argue, which is common in political science or policy science, that the policy-making process is not only one of rational problem-solving, but also one of agenda-setting, problem definition and technical-institutional feasibility.¹⁰⁶ The other variations discussed in this chapter would depend on other factors; for example, the Finnish Proposal could be contingent on the lobbying power of retailers. The

¹⁰⁴ Environmental Audit Committee, *Personal Carbon Trading*, *supra*.

¹⁰⁵ Fawcett, 'Personal Carbon Trading', *supra*, pp. 9-10

¹⁰⁶ Yael Parag and Nick Eyre, 'Barriers to Personal Carbon Trading in the Policy Arena' (2010) 10 *Climate Policy* 10 353.

EET is more ambitious than the PCT in scope, and would be subject to the EU policy making process. Further, the same institutional factors that led to the political acceptability of the EU ETS, including improved learning about what emissions trading entails, the lobbying power of companies¹⁰⁷ such as British Petroleum and Shell, and a lowering of cultural resistance against ‘pollution rights’¹⁰⁸, may not fully apply to the EET. In fact, it could work the other way around. Acceptance for the EET could be undermined by the fact that the EU ETS and the CDM, for instance, are occasionally appearing in the media as partially failing systems, for instance due to over-allocation, windfall profits, too low carbon prices and environmentally unsound mitigation projects.¹⁰⁹ Thus, it appears that political acceptability partly or perhaps largely depends on public acceptability, including the favour of influential agents and institutions.

B. Public Acceptability

Unlike political acceptability which is crystallised by way of regulation, legislation and even ex-post enforcement, public acceptability is more dynamic and is difficult to generalise across both time and space. For example, in an effort to incentivize switching from personal transport to public transport in Denmark, free one-month travel cards for public transport were provided to 500 car drivers.¹¹⁰ For the duration of this experiment, there was an increase in the usage of public transport and as soon as the coupons (or subsidy) stopped flowing, so did the sudden increase in using public transport. In addition for an EET scheme providing a long-term incentive, to be truly acceptable, it needs to be perceived by the public as fair and equitable in order to invoke a

¹⁰⁷ Marcel Braun, ‘The evolution of emissions trading in the European Union-the role of policy networks, knowledge and policy entrepreneurs’ (2009) 34 *Accounting, Organizations and Society* 479.

¹⁰⁸ Edwin Woerdman, ‘Path-Dependent Climate Policy: The History and Future of Emissions Trading in Europe’ (2004) 14 *European Environment* 261.

¹⁰⁹ See for instance, Gerard Wynn, ‘Europe Tries to Stem a Plunge in Carbon Prices’, *The New York Times*, January 8, 2012, <http://www.nytimes.com/2012/01/09/business/global/09iht-green09.html>

¹¹⁰ John Thogersen and Berit Moller, ‘Breaking car use habits: the effectiveness of a free one-month travelcard’ (2008) 35 *Transportation* 329.

change in behaviour and attitudes.¹¹¹ Indications towards public acceptability of the EET may be gleaned from studies that have already been conducted.

Andersson, Lofgren and Widerberg have assessed the attitudes towards a personal carbon allowance scheme, and have arrived at a tentative conclusion that the perceived complexity of such a scheme may be the primary obstruction to acceptability.¹¹² The study on attitudes, however, does not shed any light on whether a pan-European trading system would be acceptable, given that people may have different opinions on the emissions of individuals belonging to other countries within the EU, and may have strong attitudes in favour of or against the EU ETS. It may also be interesting to map the geographical location and professional profile of people corresponding to the attitudes expressed. For example, people involved in the agricultural sector may have differing views from those who use public transport in the city. Further, there is also no study as to whether the public views a carbon allowance or carbon credit as any different from a financial product. An extension of this endeavour to gather the attitudes of different stakeholders systematically would be to assess its acceptability among agents already involved in existing emissions trading markets, such as investment houses which trade in the EU ETS and the brokers who participate in any of the voluntary markets. We hypothesise that there is likely to be an asymmetry in the views of different stakeholders in a proposed EET scheme.

As is clear from the above, more nuanced research may be required to gauge the attitudes of different prospective stakeholders. However, even if we were to conduct surveys to capture such factors, we come across the general problem that expressed attitudes are not always a robust indicator of actual behaviour. To this end, Capstick and Lewis have combined a carbon footprint calculator (including electricity consumption, personal car use and flights

¹¹¹ Sebastian Bamberg and Daniel Rolle, 'Determinants of People's Acceptability of Pricing Measures - Replication and Extension of a Causal Model', in: Jens Schade and Bernhard Schlag (eds.), *Acceptability of Transport Pricing Strategies* (Oxford: Elsevier, 2003), pp. 235-248.

¹¹² David Andersson, Asa Lofgren and Anna Widerberg, 'Attitudes to Personal Carbon Allowances' (2011), No. 505, *Working Papers in Economics, School of Business, Economics and Law, University of Gothenburg*.

taken) and follow-up questionnaire on energy choices by way of a computer-based simulation to assess people's engagement with a constructed Personal Carbon Allowance system.¹¹³ Their results show that people with a high footprint were less inclined to support such a system, though the processing of one's footprint and the desire not to run out of allowances seems to show that there is an overall carbon-conserving behaviour. This study also suffers from a self-reporting bias. A majority of the sample was in a relatively high income bracket (£40 000 or more)¹¹⁴, and the assessment of engagement with an allowance system was based on answers to questions provided after providing information on such a system. The other issue which is missing from this study is the aspect of tradability.

Simulated experiments in both economics and psychology have shortcomings regarding their applicability in the real world, and this begs for field experiments. Given that the implementation of such a scheme would require the observation of energy saving and trading behaviour rather than the consolidation of stated preferences of participants, a trial pilot project appears to be the best way to assess acceptability. When Roberts and Thumim prepared one of the first reports on downstream carbon trading systems, they suggested that at that stage pilot testing is "not a good idea",¹¹⁵ arguing that a pilot was unlikely to be representative of the real world without accounting for a system of "leakage (by annexing the Isle of Wight as some have suggested!) with decent transaction systems and with no sense of 'free riders'".¹¹⁶ Subsequently, a group of researchers at the Environmental Change Institute have considered in detail the possibility of conducting a trial for personal carbon allowances.¹¹⁷ Interestingly, while the suggestion of annexing the Isle of Wight is said in jest,

¹¹³ Stuart Capstick and Alan Lewis, 'Personal Carbon Allowances: A Pilot Simulation and a Questionnaire' (2009), *UK-ERC Report*, Environmental Change Institute, University of Oxford. Available at: <http://www.eci.ox.ac.uk/research/energy/downloads/capstick09-pcasimulation.pdf>.

¹¹⁴ *Ibid*, p. 6.

¹¹⁵ Simon Roberts and Joshua Thumim, *A Rough Guide To Individual Carbon Trading: The ideas, the issues and the next steps* (London: DEFRA, 2006), p. 35.

¹¹⁶ *Ibid*, p. 36.

¹¹⁷ Tina Fawcett, Catherine Bottrill, Brenda Boardman, Geoff Lye, 'Trialling Personal Carbon Allowances' (2007) *UKERC Report No. UKERC/RR/DR/2007/002*.

such an approach is being used in Australia where the 13-square mile Norfolk Island with approximately 2500 inhabitants is now a test site for trying out a trading scheme for reducing individual emissions.¹¹⁸ The primary finding so far is that while the stated preferences of participants regarding climate change ('Environmental Consciousness') of the participants is a significant predictor of intention to participate in a PCT, their preferences for environmental behavioural is general ('Environment Action') is not.¹¹⁹

Although the CRAG is not really the same thing as an EET scheme, the former may be viewed as a field experiment of some relevance for the latter. It is clear from the members of such groups that the perception of fairness is probably the most important motivator for participation.¹²⁰

VII. CONCLUSION

End-user Emissions Trading (EET) refers to an emissions trading scheme for individuals, preferably on an EU-wide scale. Such a personal carbon trading scheme is targeted towards (a) reducing the release of greenhouse gases from energy and fuel consumption and (b) towards incentivizing climate-friendly choices, related to *consumption* (for instance, changes in food habits), *production* (household production of 'green' energy or installation of enabling infrastructure) or *utilization of resources* (changes in land-use or deforestation).

The central question that we have answered in this chapter is three-fold: Why would such an emissions trading scheme for individuals be desirable, how could such a scheme be designed and under what conditions could it be acceptable?

First, EET is desirable so as to rationalise sustainable engagement by individuals, regulate voluntary offset markets, place an emission cap on yet uncapped sectors and stimulate energy efficiency by households 'through

¹¹⁸ For a preliminary response to a survey that is part of the longitudinal project, see Alex Hendry et. al., 'Influences on intentions to use a personal carbon trading system (NICHE - The Norfolk Island Carbon Health Evaluation Project)' (2015) 5 *International Technology Management Review* 105.

¹¹⁹ Ibid, pp. 109 – 110.

¹²⁰ Howell, 'Living with a carbon allowance', *supra*.

their backdoor'. It would make the carbon incentive explicit, visible and manageable for energy consumers.

Second, EET can be designed, for instance, by allocating allowances 'downstream' and concentrating the monitoring 'upstream' at the level of fossil fuel producers and importers, allowing for the involvement of individuals while working towards reducing administrative costs at the same time. Integrating such a scheme into the existing legal framework will be a challenge and begs the unavoidable question of policy interactions and resulting inefficiencies that may arise.

Third, EET may be acceptable if people come to understand that they get an additional (carbon) bank account that will help them to improve the environment, as long as the allowance allocation is perceived to be fair. Although the European Union Emissions Trading Scheme (EU ETS) for big companies is a success in the sense that absolute emission caps have been imposed on firms and that their trading of allowances to save costs is undisputed, the current criticism on the EU ETS (e.g. over-allocation, windfall profits, too low carbon prices) may actually spill-over to the EET debate and diminish its prospects.



3

EPISTEMOLOGICAL REFLECTIONS: A TESTIMONIAL APPROACH TO BLE AND CLIMATE REGULATION*

3

“Without a profound simplification the world around us would be an infinite, undefined tangle that would defy our ability to orient ourselves and decide upon our actions.... We are compelled to reduce the knowable to a schema.”

—Primo Levi, *The Drowned and the Saved*.

I. INTRODUCTION

Among the literature reviewed in the last chapter, the most detailed consideration yet of a regulatory mechanism to arrest emissions from individuals and households is the Personal Carbon Trading Report by the Environment Audit Committee of the House of Commons, UK (‘PCT Report’).¹ This Report, based on an assessment of expert testimony, concluded

* This is a modified version of Suryapratim Roy, ‘Mediators and Moderators of Normative Reductionism: Towards a testimonial approach to expertise in legal inquiry’ (2016) 7 *European Journal of Risk Regulation* 532.

¹ Environmental Audit Committee, House of Commons, UK, *Personal Carbon Trading: Government Response to the Committee’s Fifth Report of Session 2007-2008*, London, May 26, 2008

that the idea was fundamentally sound, but noted that further research was needed on implementation and enforcement. The conclusions arrived at were dependent on the experts consulted, and how their testimony was appreciated. On reading the report, the general thrust that ‘once more research is done, we could consider’ was unhelpful. Some issues seemed irresolvable by improving on the sort of evidence considered. Notably, the PCT Report did not address what research could assist with problems of enforcement by way of liability, or equity considerations, or public acceptability, or political acceptability? These substantive questions led to procedural ones: How were the experts who testified selected, and how was their testimony understood and appreciated? This is a difficulty that afflicts EU regulatory and administrative inquiry, despite its technocratic nature of regulatory involvement, and is particularly germane to climate regulation. In the US, climate change regulation is heavily influenced by the judiciary; and even with respect to judicial inquiry on expert knowledge in the US, the fact remains that notwithstanding nuance regarding the use and filtering of specialised knowledge,² the identification of relevant candidates of specialised knowledge to defer to does not involve a justification of how such deference may take place: ‘the judge is not capable of making an epistemically legitimate decision about which special master, law clerk, or court appointed expert to consult.’³

Briefly put, while legal institutions and scholars in the EU and its Member States explicitly and implicitly rely on expert input in analysis and decision-making, there is no theory of expertise, and limited tools to interrogate the process of placing reliance on expertise. In this chapter I suggest that the time has come to move away from looking at reason and the political as conflicting categories, but work towards examining how they are associated and suggesting processes whereby expertise may be translated into law. The aim of this chapter is accordingly a modest one –it provides an analytical framework for how expertise may be understood and used by legal scholars and decision-makers. The motivation behind this inquiry is two-fold: (i) there appears to be limited

² This was set in by a line of cases following *Daubert v. Merrell Dow Pharmaceuticals* discussed later in this chapter.

³ Scott Brewer, ‘Scientific Expert Testimony and Intellectual Due Process’ (1998) 107 *Yale Law Journal* 1535, p. 1681.

guidance within formal law regarding the negotiation of expertise, and (ii) the issue of negotiating expertise is a problem that afflicts legal scholars, but is rarely addressed. With respect to BLE and climate regulation specifically, I have to regularly consult expert materials, but am often at a loss in arriving at a justified basis for negotiating expert knowledge. The traditional dichotomies of reasoning, i.e. theoretical v. empirical, inductive v. deductive are not helpful in this regard; instead, I find myself engaging in an undisciplined way with second-hand knowledge. By way of approaching a method of how such discipline may be introduced, I aim to highlight some of the concerns I have encountered while writing this book, and arrive at a constructive method to negotiate expertise. To articulate this aim, I proceed as follows: Section II addresses the idea of examining the relationship between law and expertise as Testimony using BLE as an example; Section III develops a moderator-mediator approach to how law may engage with expert inquiry, and situates EET regulation within this approach, and Section IV concludes. This exercise would undoubtedly alienate some readers. Rather than proceeding with the issues of public acceptability, political acceptability, EU law and governance identified in Chapter 2, it seems like an indulgence at best, and derailing ‘real’ research at worst. But if I may urge the reader to consider this: without conducting exercises such as this one, both regulatory processes as well as interdisciplinary research may amount to little more than paper tigers that pander to momentary political or academic push generated in certain quarters. That, in turn, may do a disservice to the problem sought to be addressed.

II. TESTIMONY IN BEHAVIOURAL LAW & ECONOMICS AND CLIMATE CHANGE

A. Engaging with Different Disciplines

While writing this book, I deeply desired some guidance on gatekeeping expert knowledge in relation to schemes similar to the EET. A quick Google Scholar search of ‘Personal Carbon Trading’ will reveal articles published in *Obesity Review*, *Ecological Economics*, *Medical Journal of Australia*, *International Journal of Physical Distribution & Logistics Management* within the first five pages. Reviewing scholarship on ancillary subjects such as ‘emissions trading’ and ‘individual engagement with climate change’ leads to an information

overload, with different disciplines and sub-disciplines heavily weighing in. Other than overload are the two compelling issues of trust in experts regarding regulatory application and conflict between forms of expertise regarding the same subject. While dealing with regulators, experts have an incentive to bear the translation costs of their expertise; if some forms of expertise appear to be authoritative yet intelligible to policy makers, then they would be retained.⁴ In practice, regulators and judges refrain from second-guessing the findings of experts, and may well rubber-stamp expert opinions.⁵ The third issue of conflict between experts is also germane to the subject matter of this book. Integral to the EET is the idea of individual engagement with climate policy, and there are incommensurable perspectives of how this issue can be addressed. This is brought out clearly in an exchange between the sociologist Elizabeth Shove and the psychologist Lorraine Whitmarsh regarding the appropriate paradigm for thinking about climate policy. Shove critiques a ‘language of individual behaviour and personal responsibility’⁶ in UK climate policy, arguing that it allows policy makers to paper over the ‘ways in which governments maintain infrastructures and economic institutions’⁷ where the real battles regarding anthropogenic climate change need to be fought. The paradigm for climate policy, Shove argues, should be the *context* rather than the *individual*. In response, Lorraine Whitmarsh (among others), a psychologist who works on instruments such as the PCT), argues that there is no reason

⁴ Take for instance Winston Churchill’s belief that ‘scientists should be on tap, not on top’. This does not take away from the fact he rendered a more favourable ear to some scientists over others; he especially valued Frederick Lindemann because he could ‘translate complicated facts and theories in a way he [Churchill] could understand.’ See Michael D. Rogers, ‘The European Commission and the Collection of Science and Technology Advice’ in Justus Lentsch and Peter Weingart eds. *The Politics Of Scientific Advice* (Cambridge: CUP, 2014), p. 116.

⁵ Busuioc makes this claim with regard to the *de facto* binding nature of non-binding opinions of executive agencies that inform the European Commission, and the reluctance on the Court of Justice to question technical findings. Madalina Busuioc, ‘Blurred Areas of Responsibility: European agencies’ scientific ‘opinions’ under scrutiny’ in Monika Ambrus et. al. eds. *The Role Of Experts In International And European Decision-Making Processes* (Cambridge: CUP, 2014), p. 383.

⁶ Elizabeth Shove, ‘Beyond the ABC: Climate change policy and theories of social change’ (2010) 42 *Environment And Planning A* 1273, p. 1274.

⁷ *Ibid.*, p. 1283.

why policy makers should solely concentrate on ‘structural transformation’ rather than ‘self-direction’ of individual behaviour.⁸ She finds possible spaces of interdisciplinary interaction as individual behaviour is contextual. Finally, Shove replies that interdisciplinarity is a gloss; with respect to climate policy, she feels that ‘sociologists are invited to fill out the context of individual behaviour’ while there have already been decisions and policy-framing about ‘a behaviour context of social action.’⁹ Her suggestion, therefore, is to allow different epistemic and ontological paradigms to exist in parallel. Shove admits that she does not explore ‘how policymakers might handle coexisting and divergent paradigms’¹⁰ and indeed provides no solution.

Given the problems of information overload, trust, and conflict, how does one decide what to read, and how such materials should be utilised to evaluate normative issues under consideration? The way out for legal scholars appears to be to read as much from as many places as possible; or to be *an exhaustive reader*. This can be observed in instances such as the length of footnotes in legal articles that is implicitly a claim to exhaustive research.¹¹ However, given that reading and writing is inevitably shaped by some inarticulate preferences, zeroing in on a particular epistemic community¹² to guide such selection is the usual practice. There appears to be no reason, however, as to why the exploration of any legal question should be confined to a particular epistemic tradition; on the contrary, if a legal understanding is supposed to be democratic, it must resist any form of capture.

⁸ Lorraine Whitmarsh, Saffron O’Neill and Irene Lorenzoni, ‘Climate change or Social Change? Debate within, amongst and beyond disciplines’ (2011) 43 *Environment And Planning A* 258, p. 259.

⁹ Elizabeth Shove, ‘On the Difference between Chalk and Cheese’ (2011) 43 *Environment And Planning A* 262.

¹⁰ *Ibid*, p. 263.

¹¹ Schlag has parodied the use of exhaustive references as a claim to justification. Pierre Schlag, ‘Spam Jurisprudence, Air Law, and the Rank Anxiety of Nothing Happening (A Report on the State of the Art)’ (2009) 97 *Georgetown Law Journal* 803. In one footnote he writes: ‘Excuse me, hello, but could I possibly get some cites here, maybe?’, fn 5, p. 804.

¹² The development of the idea of an epistemic community is attributed to Peter Haas, especially in relation to the politics that inform environmental policy. Peter M. Haas, ‘When Does Power Listen to Truth?: A constructivist approach to the policy process’ (2004) 11 *Journal Of European Public Policy* 569.

The above constraints highlight the need for a theory of knowledge, or some basis for negotiating expert knowledge for legal questions. This is evident in the approach I seek to adopt in my areas of inquiry, that of BLE and the scholars working within BLE who I cite and rely on. Such negotiation involves some amount of deference to the internal validity of behavioural economics (much like any other self-styled body of knowledge), and some manner of assessing external validity. I intend to first discuss a problem of internal validity to demonstrate that behavioural economics can be methodologically contested, namely the sort of psychology that BLE uses, and then proceed to some of the challenges posed to the external validity of BLE.

i Engagement with BLE: Internal Validity

While psychology has historically been a much-ignored discipline in economic analysis and reasoning about legal issues generally (other than with respect to specific mental health issues), the discipline is now in vogue. The mediator that caused the translation¹³ of psychology into both law and economics is behavioural economics and BLE, with a group of scholars heralding this change. At the centre of this group is the social psychologist Daniel Kahneman, who made his work intelligible to economists and legal scholars through collaborations with the mathematician Amos Tversky, the business economist Richard Thaler and legal scholar and regulator Cass Sunstein.

While Sunstein's work and his application of social and cognitive psychology is often critiqued,¹⁴ legal scholars find themselves incompetent to assess the internal validity of Kahneman's work. This is not entirely

¹³ For an account of the events and associations that served as milestones in the ascendancy of behavioural economics within the history of economic thought, see Floris Heukelom, *Behavioral Economics: A History* (Cambridge: CUP, 2014).

¹⁴ For the selective use of psychology in Sunstein's work, see Dan Kahan, Paul Slovic, Donald Braman and John Gastil, 'Fear of Democracy: A cultural evaluation of Sunstein on risk' (2006) 119 *Harvard Law Review* 1071. For the translation of psychology in policy questions, see Amy Sinden, 'Formality and Informality in Cost-Benefit Analysis' (2015) 1 *Utah Law Review* 93. For the absence of inquiry into the relevance of the forms of expertise Sunstein employs, see Martin Kusch, 'Towards a Political Philosophy of Risk: Experts and publics in deliberative democracy' in Tim Lewens ed. *Risk: Philosophical Perspectives* (London: Routledge, 2007). See also Pierre Schlag, 'Nudge, Choice Architecture and Libertarian Paternalism' (2010) 108 *Michigan Law Review* 913.

unproblematic: the way experiments are conducted by social psychologists – and hence the way internal validity is established – is not uniform across researchers relying on experimental methods and findings.¹⁵ Substantively, there is a particular methodological choice that I wish to highlight – the utilisation of the *strong inference method* in Kahneman and Tversky's research,¹⁶ the logic of which affects the interpretation of experimental data. This may be explained in the following way: in their experiments, there are questions posed to participants (or an activity designed) after a manipulation that can be answered (or performed) either through the use of irrational heuristics or rational decision-making. What is found in the experiments is that the subjects reason 'heuristically' as hypothesised leading to their predictive value of anticipated errors in decision-making; rationality is rarely achieved given the conditions.¹⁷

In keeping with the benefits of strong inference, the interpretation of data is linked to the way it is presented as well: 'strong evaluative language' is used to describe experimental results.¹⁸ Thus, the production of behavioural science is intimately linked to the technologies of communication.¹⁹ Given the repeated successful experimental validation of pre-conceptualised

¹⁵ Gerd Gigerenzer in particular questioned the methods used by Kahneman and Tversky over a series of articles and exchanges. See for instance, Gerd Gigerenzer, *On Narrow Norms and Vague Heuristics: A rebuttal to Kahneman and Tversky* (1996) 103 *Psychological Review* 592.

¹⁶ A detailed methodological interrogation of Kahneman and Tversky's foundational work, including the strong inference method is found in Lola L. Lopes, 'The Rhetoric of Irrationality' (1991) 1 *Theory & Psychology* 65.

¹⁷ Hence Lopes: "...the sheer weight of all the wrong answers tends to deform the basic conclusion, bending it away from an evaluatively neutral description of process and toward something more like 'people use heuristics to judge probabilities and they are wrong' or even 'people make mistakes when they judge probabilities because they use heuristics.'" Ibid, p. 73. This may indicate why scholars such as Vernon Smith who conduct economic experiments that manipulate the conditions till participants reach rational behaviour are at odds with the methodology employed by Kahneman and Tversky. For an overview of such conflicts, see generally Heukelom, *Behavioral Economics*, *supra*.

¹⁸ Lopes, 'The Rhetoric of Irrationality', *supra*, p. 76.

¹⁹ Thus, knowledge about human behaviour is integrally linked to the way such knowledge is presented. This line of reasoning – though not directed at psychological experiments – motivates Bruno Latour's work on the sociology of science, including the way economics as a discipline shapes itself.

deviances from a rational actor model, the predictive power of such research lends itself to mathematical modelling and ‘predictably irrational’ financial choices. Further, as several popular books on behavioural economics suggest, the findings regarding the inadequacy of people to make rational choices are intuitive and relatable to general readers. In brief, Kahneman’s work is rendered intelligible to a wide variety of readers from different disciplines owing to the highly successful experiments about intuitively appealing findings about heuristics and biases. But does that reduce the value of Kahneman and Tversky’s engagement with questions about behaviour? Lopes argues that notwithstanding the use of strong inference that makes ‘seeing the data unnecessary’, the thought experiments used reveal critical psychological variables that may have gone unnoticed.²⁰ Further, I suggest that contestation about methods or questions about scientific certainty do not necessarily dampen the utility of such work for regulation. This brings us to external validity.

ii. Engagement with BLE: External validity

In a recent contribution Owen Jones argues that the primary reasons why BLE has not become the primary approach adopted in mainstream legal scholarship are because (i) it confines its methodology to the experimental method found in social psychology, and (ii) it allows psychological studies to be filtered through economics.²¹ By way of an example, he takes the endowment effect and argues that if law is serious about ‘deploying the best models of human behaviour’, then it cannot rely on ‘conceptually hitching it to the single boxcar of economics’ or concentrating on social psychology, which can only offer a ‘small proportion of all relevant insights from psychology.’ He is quite blunt about his recommendations to bring about better scholarship: ‘Stop defining the field of inquiry in relation to Economics’, ‘Stop thinking it’s really the method that matters.’

I would like to discuss the reasons why I partially agree with Jones, and why I don’t, and use this discussion as a starting point for explaining why it

²⁰ Lopes, ‘The Rhetoric of Irrationality’, *supra*, p. 73.

²¹ Owen Jones, ‘Why Behavioral Economics Isn’t Better and Why it Could Be’ in J. Teitelbaum & K. Zeiler eds. *Research Handbook On Behavioural Law And Economics* (2015).

is important to develop a conceptual framework for *Behavioural Testimony in Law*.

To begin with, I share his concern about the unreasoned practise of privileging some forms of psychology and economics in deciding on a policy.²² There seems to be no reason why social psychological methods or economic models should be used to decide on either a policy or a legal issue. This scepticism informs several critiques of *Nudging*.²³ There seems to be a belief that ‘Nudge Units’²⁴ are now a part of governmental structures. But the truth is that they are not. Few countries have these units, and they rarely translate into actual policy.²⁵ As to why that is the case, it could clearly be path-dependence to a certain way of doing policy, or reasoning about law. To switch from a certain path, there should be a convincing basis, which BLE arguably has not been able to provide. Indeed, prior to legal scholars who found normative applications for behavioural economics, it was mostly a descriptive enterprise, designed to ‘dispel the illusions’²⁶ that characterise neo-classical economics. There was no clear articulation by those who initially performed the experiments and drew inferences about the ‘predictably irrational’ nature of individual decision-making as to whether and what extent it should provide a basis for policy, or legal decision-making. There was some indication, however, that the findings should not replace the focus on measurement and modelling prevalent in neo-classical economics. As Thaler puts it: “It goes without saying that the existence of an optical illusion that causes us to see one of two equal lines as longer than the other should not reduce the value we place on accurate measurement. On the contrary, illusions demand

²² Roy, ‘Privileging (some forms of) Interdisciplinarity and Interpretation’, *supra*.

²³ Yeung, ‘Nudge as Fudge’, *supra*; Sabine Frerichs, ‘False Promises? A sociological critique of the behavioural turn in Law and Economics’ (2011) 34 *Journal Of Consumer Policy* 289.

²⁴ The Behavioural Insights Team in the UK government is commonly referred to as the Nudge Unit. For an account of its functioning, see David Halpern, *Inside the Nudge Unit: How small changes can make a big difference* (London: Random House, 2015).

²⁵ Evan Selinger and Kyle Powys Whyte, ‘Nudging Cannot Solve Complex Policy Problems’ (2012) 1 *European Journal of Risk Regulation* 26.

²⁶ Richard H. Thaler, ‘The Psychology of Choice and the Assumptions of Economics’, in Richard H. Thaler ed. *Quasi Rational Economics* (New York: Russell Sage Foundation, 1991), p. 138.

the need for rulers!”²⁷ The proposition therefore appears to be that behavioural studies should be used to correct and complete simple neo-classical models;²⁸ thus the way the findings of behavioural economists would have normative power would require the moderation of existing economic models. Thus, *there appears to be an argument for privileging some forms of psychological studies due to their compatibility with forms of economics that seek to model rational decision-making.*²⁹ If this is the case, then Jones’ concerns could be considered to be misplaced, as there is a reasonable basis for privileging some forms of psychology. However, the other interpretation of Thaler’s observation could be that it is possible for the findings of behavioural psychology to exist independently of the measuring technologies found in some forms of economics. In practice, this is how the regulatory focus of BLE – rather than behavioural economics *tout court* - appears to function. Take Sunstein’s idea of going paperless through a default rule of double-sided printing, for instance.³⁰ He acknowledges the value of finding a low-cost alternative for achieving an environmental goal, and then uses the default option as a heuristic device gleaned from the findings of behavioural economists. Practically speaking, therefore, there is no mediation by economic models, and a normative use of psychology-based heuristics is seen as worth pursuing in its own right. In this case, therefore, what would be useful for the policy to be effective, and generate responsiveness is to see what might explain individuals *not* resorting to the default rule. As Nathan Berg observes, normative behavioural economics requires the development of a *distinct toolkit of analytical techniques* ‘borrowing from psychology, sociology, cognitive science, political science, psychology, anthropology, and philosophy.’³¹ This view is in conformity with Jones’.

²⁷ Ibid.

²⁸ This endeavour has been usefully characterised as ‘fitting and repairing the rational-choice model.’ Werner Güth, ‘(Non) Behavioral Economics: A programmatic assessment’ (2008) 216 *Zeitschrift Für Psychologie* 244.

²⁹ Esther Mirjam-Sent, *Behavioral Economics: How Psychology Made Its (Limited) Way Back Into Economics* (2004) 36 *History Of Political Economy* 735.

³⁰ Cass Sunstein, ‘Deciding by Default’ (2013) 162 *University Of Pennsylvania Law Review* 1, p. 13.

³¹ Nathan Berg, ‘Normative Behavioral Economics’ (2003) 32 *Journal of Socio-Economics* 411, p. 419.

The reason why I think Jones' critique is not entirely convincing is because he does not explain on what basis law should declare or refute allegiance to a particular method or science. Jones has made his career in exploring the relationship between law and evolutionary biology. In his worldview, BLE falls short because neuroscience and progress in behavioural biology can serve as better explanatory methods in explaining status-quo bias than the methods employed in the social psychology laboratory. Jones does not, however, offer a theory of why fMRI scans and methods found in behavioural biology should be privileged over a social psychology experiment.³² Generally speaking, this issue eludes BLE scholars –what is the basis for deciding on an appropriate science for policymakers and legal scholars to take human behaviour into account? One of Sunstein's primary claims in his work is that expert knowledge should replace lay (and sometimes judicial) reasoning and decision-making. However, as Martin Kusch argues, Sunstein does not differentiate between experts; in any legal appreciation of risk, Sunstein's work does not speak to which experts could be relied on.³³ In addition, Pierre Schlag notes that Sunstein has no answer as to why we should trust experts.³⁴ Admittedly, we should not trust ourselves as we are not in control of our irrational selves, but why should we trust experts? And which experts should we trust? What I draw from this is that Sunstein, like Jones, and BLE scholarship as such *has no theory of expertise*. Or, there is no disciplined manner in understanding which forms of expertise may be legally useful.

Thus when Boyd, Kysar and Rachlinski (some of the leading scholars currently working on climate law and BLE) argue that environmental lawyers have 'much to gain from canvassing such disciplines as geography,

³² It may be noted that social psychologists have made similar arguments regarding the limited explanatory potential of evolutionary biology, and the primary methodological technology it employs—the differential equation. Mazahrin Banaji and Robert Crowder, 'Experimentation and its Discontents' in P.E. Morris and M. Gruenberg eds. *Theoretical Aspects Of Memory* (London: Routledge, 1994), pp. 303 – 305.

³³ Kusch, 'Towards a Political Philosophy of Risk', *supra*, p. 131.

³⁴ Schlag, 'Nudge, Choice Architecture and Libertarian Paternalism', *supra*. The cumbersome activity of determining individual instances of whether experts can be trusted can be eased by assessing the trustworthiness of experts. See Elizabeth Fricker, 'Second-Hand Knowledge' (2006) 73 *Philosophy and Phenomenological Research* 592.

ecological anthropology, environmental sociology, environmental history, and political ecology,³⁵ they also acknowledge the need ‘to recognise knowledge production as something that can itself be studied and regulated.’³⁶ We therefore turn to this concern of how knowledge production can be studied, and how appropriate forms of expertise can be recognised.

What may be useful in this regard is to invoke the Philosophy of Knowledge, Sociology of Knowledge and the Economics of Knowledge to understand the *context* behind science and expert knowledge.³⁷ One theme that runs through these sub-disciplines and bodies of scholarship is the issue of epistemic and hermeneutic reductionism. The issue of epistemic and hermeneutic reductionism has been an explicit subject of study for a body of scholars working at the interface of philosophy, ethics and political theory on the idea of *testimony*. Scholarship on Testimony has been all but neglected by legal scholars³⁸ and practitioners. Only Scott Brewer³⁹ to my knowledge has expressly engaged in an extensive theoretical study of legal testimony. Recently, Gustavo Riberio, one of Brewer’s students, has considered the possibility of non-arbitrary legal reductionism.⁴⁰ I will interrogate this possibility, and provide an approach as to how it may be done, using individual engagement with climate law as an example. To do so, I first provide a brief introduction to the idea of legal reductionism and the use of the discipline of Testimony to understand reductionism.

³⁵ William Boyd, Douglas Kysar and Jeffrey J. Rachlinski, *Law, Environment and the “Nondismal” Social Sciences* (2012) 8 *Annual Review of Law and the Social Sciences* 183, p. 205.

³⁶ *Ibid.*

³⁷ This manner of engagement is inspired by Coase’s preference for a Kuhnian view of the centrality of the philosophy of science rather than a Friedman-led scientific positivism in conducting economic inquiry. Ronald Coase, ‘How Should Economists Choose?’, Warren G. Nutter Lecture in Political Economy, 1982, pp. 15 – 18.

³⁸ A WESTLAW International combined world journals and articles search reveals that 17 articles in total refer to C.A.J Coady, the most noted testimony scholar, as against 3685 articles that refer to Daniel Kahneman.

³⁹ Brewer, ‘Scientific Expert Testimony and Intellectual Due Process’, *supra*.

⁴⁰ Gustavo Riberio, ‘No Need to Toss a Coin: Conflicting scientific expert testimonies and intellectual due process’ (2013) 12 *Law, Probability And Risk* 299.

B. A Testimonial Approach to Legal Reasoning

i. The Inevitability of Legal Reductionism

Like any other system, a legal system tends to be self-referential.⁴¹ Analysis conducted within the discursive boundaries of a legal system would be a tool for the actualisation of such a system. Such actualisation is achieved through interpretation, where interpretation serves normative ends. The primary property of legal interpretation is openness to complexity, and reduction of such complexity through generalisation. Scahuer gives the example of a police officer who stops a driver for unsafe driving to illustrate this property of generalisation. A particularistic police officer should ideally take everything into account: 'the condition of the roads, the amount of traffic, the weather, the time of day, the type and condition of the car, the experience and previous driving record of the driver, the explanation offered by the driver, and perhaps even the ability of the driver to pay the fine.'⁴² However, in reality, such 'real differences' are suppressed in favour of general rules made in advance regarding the entire category of road safety where 'all drivers driving cars under all conditions on a moderately large stretch of the highway'⁴³ are treated in roughly the same way, or where a rule gathers together dissimilar particulars and subjects them to similar treatment.⁴⁴ Every particularity about the driver or the environment would have its own science or explained by myriad sciences. The process of legal reasoning is such that the 'truth' of other disciplines and communities is replaced and *law creates truth*; as Balkin puts it: '...one of the most interesting features of law as a system of social conventions is the ability to make things true or, to put it another way, create

⁴¹ The chief proponents of this view are scholars who draw on Niklas Luhmann's Systems Theory to highlight the autopoietic nature of law. See Gunther Teubner, 'How the Law Thinks: Toward a constructivist epistemology of law' (1989) 23 *Law & Society Review* 727.

⁴² Frederick Schauer, 'The Generality of Law' (2004) 107 *West Virginia Law Review* 217, p. 219.

⁴³ Ibid.

⁴⁴ Ibid, p. 233. 'In law, it thus seems, generality has a disproportionate presence, but particularity has only a proportionate presence.'

legal categories that permit characterisations of situations and practices that are true or false.⁴⁵

Legal agents that derive their legitimacy from upholding ‘a culture of justification’⁴⁶ such as the EU has to be open to epistemic communities during the process of truth-creation. Every community, in turn, would seek to have a hold on truth-creation: given the normative power of a legal system, different interests and epistemic communities compete to capture the life of the law. In general dealings, the technical language of investigation and communication of an epistemic community does not have to be reduced to a language that everyone speaks; not so in the case of legal testimony where there is a necessity for the speaker to formulate her assertion in an intelligible manner;⁴⁷ where the properties of such intelligibility are determined by the legal institution or discourse that is appealed to. Every act of epistemic appreciation is an act of normative interpretation. The technologies of interpretation pervade knowledge itself, as *expert assertions are interpretatively rendered intelligible by the legal hearer*.

Thus, what we see above is the inevitability of legal reductionism of complexity through legal intelligibility. But what informs the process of rendering complexity legally intelligible? For this, we turn to a discussion on Testimony.

ii. Introducing Testimony

I first came across literature on testimony while investigating the reliance placed on Credit Rating Agencies (CRAs) by regulators. The project involved both forms of testimony that we discussed with respect to the PCT Report – official testimonial hearings before regulators, as well as the use of second-hand knowledge by regulators and judges. I found it odd that the discourse on reducing the reliance placed on CRAs involved using the ‘common language

⁴⁵ Jack Balkin, ‘The Proliferation of Legal Truth’ (2003) 26 *Harvard Journal Of Law And Public Policy* 5.

⁴⁶ Ibid.

⁴⁷ See Nicola Mößner, ‘The Concept of Testimony’ in Christoph Jäger and Winfried Löffler eds. *Epistemology: Contexts, Values, Disagreement* (Kirchberg am Wechsel: Ontos Verlag, 2011), p. 209.

of risk' advocated by CRAs.⁴⁸ Miranda Fricker's *Epistemic Injustice* provided a way of explaining this paradox: If we were to characterize experts as 'speakers' and regulators as 'hearers,' a credibility excess could be attributed to some experts over time and/or space, whereby the hearer makes an unduly inflated judgment of 'the speaker's credibility, perhaps missing out on knowledge as a result.'⁴⁹ Fricker concentrates mostly on 'credibility deficit' as a form of epistemic injustice where the speaker is underestimated by the hearer. She, however, also accommodates the possibility of a credibility excess that distorts any epistemic exchange, and may, on occasion, also constitute epistemic injustice for the speaker if this credibility excess leads to an inflated precarious 'epistemic arrogance.' One may ask—how does credibility deficit or excess come about, and why does the hearer make an unduly deflated/inflated judgment of the speaker? Fricker's response is that 'pure' power structures condition the credibility attributed to the speaker, and makes it difficult for the hearer to actively change the way the speaker is heard. The essential property of a 'pure' power structure is that proactive agency relations do not need to be identified in individual cases; the 'pure structure' perpetuates itself passively through 'reason's entanglements with social power.'⁵⁰

Such social power may be constituted through forms of capture: 'revolving doors' between some speakers and the hearer, more subtly through the similarity of cultural and epistemic orientations. It may also be constituted through surrogate measures of prestige⁵¹ such as the scientism of some forms of speech over others. Identifying such power structures that lead to epistemic deep capture seems to be one way to 'study knowledge production' (the concern raised in Section IIIA) and could be identified as a theory of expertise.

The above, however, is one of several ways of interrogating testimony. Fricker's framework is more *performative*: she uses feminist ethics as the

⁴⁸ Giulia Mennillo and Suryapratim Roy, *Ratings and Regulation: An irreversible marriage?* Harvard Weatherhead Centre for International Affairs Working Paper 004/2014.

⁴⁹ Miranda Fricker, *Epistemic Injustice: Power And The Ethics Of Knowing* (Oxford: OUP, 2007), p. 20.

⁵⁰ *Ibid*, p. 3.

⁵¹ See Susan Haack, 'Credulity and Circumspection', Proceedings of the American Catholic Philosophical Association, 2015.

moderator for her view on testimony, under the discursive shadow of which the mediator of social power operates. This method of reductionism differs from the standard concerns of testimonial reductionism, i.e. one where the question is whether testimony is ‘reducible to other epistemic sources, such as perception, memory and reason.’⁵² Thus, Fricker looks to social rather than individualist sources. Even if the identification of Fricker’s sources may be contestable, it is more nuanced than scholars who do not situate their sources within a chosen ethical or normative framework. The other primary testimonial framework is *constitutive*, i.e. testimonial exchange creates ‘epistemic features in its own right.’⁵³ I suggest below that the testimonial process in legal decision-making is constitutive of normativity, but it is important to not lose sight of the elements that lend themselves to performativity.

iii. Testimony in Legal Analysis

Legal testimony is usually associated with an appreciation of formal evidence. When it comes to appreciating expert evidence in a courtroom, it is either left to the lawyers to identify the experts (and present them as *amicus curae* or expert witnesses), or in some cases, there could be court-appointed experts. Irrespective of whether experts are selected by a judge or a lawyer, the judge has a gatekeeping role, and this includes selection of a credible testifier (in addition to the traditional requirement of weighing the testimony of different testifiers, performed by juries in some legal systems). This gatekeeping role is true for regulators as well: judges and regulators alike consult different forms of literature and opinions in arriving at their decisions. It is through such consultation that judges and regulators claim to replace arbitrariness with reason.

⁵² Jennifer Lackey, ‘Testimonial Knowledge’ in Sven Bernecker and Duncan Pritchard eds. *Routledge Companion To Epistemology* (London: Routledge, 2010), p. 316.

⁵³ Integral to this question is determining the scope of what constitutes testimony, as against a mere utterance. The law of evidence clearly has a preference for the performative view of testimony; the distinction between hearsay and direct evidence found in evidence law ‘lacks any agreed-upon vocabulary for discussing or regulating the use of expert documentation.’ Karen Petroski, ‘Texts and Testimony’, *supra*, p. 83.

Disputes have arisen when judges are found to replace the expert information provided by litigating parties,⁵⁴ or when regulators in the EU replace the expert information provided by Member States.⁵⁵ Such conflicts, however, do not vitiate the need or the practice of legal decision-makers to constantly consult and assess expert inquiry. In this regard, Sunstein believes that it is essential for decision-makers to consult the top peer-reviewed journals in different social sciences.⁵⁶ In keeping with the general shortcomings of Sunstein's view of expertise discussed earlier, he does not provide guidance as to how such consultation is to be done, or why peer-reviewed journals should be trusted blindly, given that the best journals within a certain discipline may privilege some intradisciplinary trends, and some interdisciplinary influences over others.⁵⁷

In contrast, both Brewer and Riberio argue that for legal analysis to be justified, it is necessary to chart out 'epistemic non-arbitrariness in legal reasoning.'⁵⁸ For this, it is necessary for the non-expert legal decision-maker to have a basis for deciding between conflicting scientific testimonies. In regulatory decision-making and legal scholarship, the search for justification goes a step further – there is need to justify what testimony is branded as expert or scientific testimony, and hence the process of identifying privileged testimonies that are in conflict would also need to be justified. As any speaker assumes the position of a testifier before the law, assessment of credentials of the speaker serves as a proxy for the testifier's credibility. In that respect, the seemingly constitutive nature of legal testimony is actually performative: the

⁵⁴ *Queensland Conservation Council Inc. v Xstrata Coal Queensland Pty Ltd & Others* [2007] QCA 338. The Queensland Court of Appeals found a Tribunal in breach of natural justice as it relied on its own materials regarding climate science that were not submitted in evidence.

⁵⁵ Case C-405/07 P *Kingdom of the Netherlands v. Commission of the European Communities* [2008] ECR I-08301. The CJEU found a procedural impropriety on the part of the Commission in assessing scientific evidence, as it did not take into consideration data provided by the Netherlands.

⁵⁶ Cass R. Sunstein, 'From Technocrat to Democrat', Harvard Public Law Working Paper No. 14-10, 2014.

⁵⁷ Rik Pieters and Hans Baumgartner, 'Who Talks to Whom? Intra- and Interdisciplinary Communication of Economics Journals' (2002) 40 *Journal of Economic Literature* 483.

⁵⁸ Brewer, 'Scientific Expert Testimony and Intellectual Due Process', *supra*, p. 1672; Riberio, 'No Need to Toss a Coin', *supra* p. 341.

hearer's opinion depends as much on the predispositions of the hearer and the status of the speaker as the content of the speaker's testimony.⁵⁹ This view of placing reliance on non-testimonial reasons for assessing a speaker's testimony acquits the legal reductionist from the charges of 'gullibility, epistemic irrationality and intellectual irresponsibility.'⁶⁰ However, it is unclear on what basis the credibility of a testifier is assessed, and the creation of law's truth is in reality merely performative.

The first problem – how to assess the credibility of the testifier – is a problem that Brewer argued has no solution other than 'tossing a coin'. To briefly reconstruct Brewer's position, the primary problem that concerns Brewer is conflicting testimony, or how a legal decision-maker can negotiate different forms of expertise without making 'epistemically arbitrary judgements.'⁶¹ To do so Brewer assumes a pre-selection of relevant forms of expertise or science, and he argues that in order to replace epistemic arbitrariness by 'intellectual due process', it is essential to appreciate the 'cognitive aims and methods of science.'⁶² He stresses on the understanding of the cognitive aims and methods of expertise as this would avoid 'reliance on such indicia of expertise as credentials, reputation, and demeanor,'⁶³ that render legal decisions arbitrary. The practical method advocated to avoid arbitrariness and develop an understanding of the aims and methods of a science is for a legal decision-maker to wear two hats, i.e. to be an expert in the form of expertise sought to be applied to a legal issue. As Brewer explains: 'On this [the 'two-hat'] model, the system seeks to ensure that one and the same decisionmaker has both legal legitimacy (by being duly elected or appointed by a legitimate elective or appointing authority) and epistemic competence with the basic formal tools of scientific analysis.'⁶⁴

The scepticism expressed by Brewer regarding the unmediated influence of the 'credentials, reputation and demeanor' of experts is certainly worth

⁵⁹ Lackey, 'Testimonial Knowledge', *supra*, p. 316.

⁶⁰ *Ibid*, p. 324.

⁶¹ Brewer, 'Scientific Expert Testimony and Intellectual Due Process', *supra*, p. 1539.

⁶² *Ibid*.

⁶³ *Ibid*.

⁶⁴ *Ibid*, p.1679.

noting, as such influence would allow for cementing and perpetuating the interests of particular epistemic communities. However, I would like to argue that the ‘two-hat’ solution mooted by Brewer does not acquit the legal scholar or decision-maker from arbitrarily determining the credentials of a testifier. This is primarily because the ‘expert hat’ cannot be assumed; and Brewer misses this point because he does not explain how the pre-selection of different forms of expertise to explain a legal issue works.⁶⁵ As argued in relation to BLE, it is not clear whether a social psychologist or a neuroscientist or a behavioural biologist or a sociologist would be the appropriate expert. What this requires is an analytical process of how to determine and use expertise, which Brewer does not sufficiently respond to, and we can only conclude that placing reliance on the ‘two-hat’ solution should be subject to as much scepticism as reliance on the credentials, reputation or demeanour of the expert. There could be a normative problem with Brewer’s solution as well – scientific expertise may be on the side of rich defendants, or bodies of knowledge that support the status quo.⁶⁶ Without a constitutive account of expertise, an assumed disciplinary competence in informing a particular legal question may implicitly result in preserving some privileged interests over others. Given difficulties with this alternative, it is necessary to chart out an analytical framework for assessing the performative and constitutive nature of expertise in law.

In keeping with Fricker’s line of inquiry discussed earlier, the way forward seems to be to heuristically look for the construction of epistemic and hermeneutic authority.⁶⁷ As to how this is done has occupied critical theorists for aeons,⁶⁸ but more recently, this has been the primary line of

⁶⁵ Brewer, however, is not unaware of the conceptual difficulties surrounding a ‘two-hat solution’. He queries: ‘What kind of training should the experts – or expertly trained judges – get?’ And he hints at the possibility of intra-disciplinary conflicts: “Will scientific discipline become so specialised that it ceases to make sense to talk about general epistemic competence even within a discipline?” Ibid, p. 1679.

⁶⁶ This has indeed been one of the primary critiques aimed at the post *Daubert* line of cases, *infra*.

⁶⁷ Roy, ‘Privileging (some forms of) Interdisciplinarity and Interpretation’, *supra*.

⁶⁸ Habermas, for instance, argues that in democratic decision-making epistemic authority requires communication between stakeholders, where ‘private experiences’ pass on to the ‘public practices’ of a collective. Jürgen Habermas, *Truth And Justification* (Cambridge, MA:

inquiry by Science and Technology Studies (STS) scholars who utilise a socio-historical method to interrogate the construction of expertise; their approach entails an interrogation of how the credibility of an expert or the body of knowledge itself may be assessed. Further, given their interest in how expertise is constituted in the process of communication, there is an analytical interest in *assessing the interpretative event of knowledge being translated into expert testimony*. Such scholarship has come to the fore in interrogating the criteria of scientific credibility developed by the US Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals*,⁶⁹ and assessing the applicability of such jurisprudence in different legal systems, institutions and areas of law. *Daubert* was a substantial change from the existing *Frye*⁷⁰ standard of ‘general acceptance’ of scientific evidence, as now a greater role was given to judicial gatekeeping of expert testimony before such testimony was presented to the jury.⁷¹ This role was judicially assumed and constructed through the development of non-exhaustive criteria for the judicial assessment of the reliability of such evidence. Subsequently, *General Electric v. Joiner*⁷² allowed for the contesting of expert ‘opinion’ based on other data, and *Kumho Tires v. Carmichael*⁷³ applied gatekeeping inquiries to ‘scientific, technical or other specialised knowledge.’ The primary concern in these cases was a re-evaluation of legal gatekeeping of expert knowledge, especially with regard to filtering reliable knowledge in jury trials.

MIT Press, 2003), p. 134. For a review of the engagement of others theorists, see Teubner, ‘How the Law Thinks’, *supra*.

⁶⁹ 509 U.S. 579 (1993). The primary issue in the case was whether birth defects in the petitioner’s children could be attributed to the drug Benedectin produced by the respondents.

⁷⁰ *Frye v. United States*, 293 F. 1013, D.D. Cir. 1923. The D.C. Appellate Court famously disallowed the use of the polygraph test till there was a ‘general acceptance’ among the ‘relevant scientific community’.

⁷¹ Cole summarises the difference as follows: “Whereas *Daubert* asks the court itself to render a judgment as to whether the proffered evidence is reliable, *Frye* directs the court to defer to the judgment of the ‘relevant scientific community.’” Simon A. Cole, ‘Out of the *Daubert* Fire and into the *Fryeing* Pan: Self validation, meta expertise and the admissibility of Latent Print Evidence in *Frye* jurisdictions’ (2008) 9 *Minnesota Journal Of Law, Science And Technology* 453, p. 460.

⁷² 522 U.S. 136, 118 S. Ct. 512 (1997).

⁷³ 526 U.S. 137 (1999).

Gradually, the influence of the *Daubert* triad of cases seeped outside the boundaries of formal evidentiary procedure and jury trials, and spread to the use of expertise by judges in domains such as administrative law.⁷⁴ The judiciary was not the only institution that was hit by this movement, as it spread into regulatory reasoning, and legal scholarship generally. As Brewer sums it up, the change was not restricted to positive law on evidence as it was a paradigm shift regarding legal reasoning involving ‘the paradigmatically philosophical task of [directly] exploring the criteria of the concept of science.’⁷⁵ Given the extension of *Daubert* to ‘non-scientific’ expertise⁷⁶ through *Joiner* and *Kumho Tires*, legal reasoning goes a step beyond looking at science in a narrow way, and Brewer’s formulation could be extended to involve *the analytical task of directly exploring the criteria of expertise*. This line of analysis is relevant for other legal systems and areas of law due to the universality of this task; importantly, in the absence of an explicit inquiry into the kinds of expertise favoured by legal institutions in the EU and other legal orders, some of the contested features of *Daubert* may implicitly seep into normative reasoning. For instance, while Justice Blackmun’s reliance on Popperian falsification in *Daubert* as a marker of reliable science has been heavily critiqued,⁷⁷ it may be noted that Justice Blackmun cited a legal scholar as an interpreter of the epistemic authority of Karl Popper.⁷⁸ For legal scholars and decision-makers engaged in normative reductionism, this approach therefore seems to be one preferable to one that

⁷⁴ Alan Charles Raul and Julie Damper Zwyer, ‘Regulatory Daubert: A proposal to enhance judicial review of agency science by incorporating Daubert principles into Administrative Law’ (2003) 66 *Law and Contemporary Problems* 7. Some commentators have argued that *Daubert* shifts the policy function to the judiciary, as judge-made ‘rhetorical’ standards are used by administrative agencies to decide on the quality and nature of expert information. Claire R. Kelly, ‘The Dangers of *Daubert* Creep into the Regulatory Realm’ (2006) 14 *Law and Policy* 165.

⁷⁵ Scott Brewer, ‘Scientific Expert Testimony and Intellectual Due Process’ (1998) 107 *Yale Law Journal* 1535, p. 1547.

⁷⁶ See Leslie Morsek, ‘Get on Board for the Ride of Your Life-The ups, the downs, the Twists, and the Turns of the Applicability of the Gatekeeper Function to Scientific and Non-Scientific Expert Evidence: *Kumho’s* Expansion of *Daubert*’ (2000) 34 *Akron Law Review* 689.

⁷⁷ See Haack, ‘Credulity and Circumspection’, *supra*.

⁷⁸ Citing Michael D. Green in *Daubert v. Merrell Dow Pharmaceuticals*, pp. 585-586.

requires ownership of a specialised ‘hat’ tailored to suit the self-referential demands of a particular science or narrow aspect of scientific inquiry. Thus, the suggestion is in relation to both institutional reform and discursive preferences: institutionally, the interest in science and expertise should be accompanied by an interest in meta-expertise entailing appointment of scholars and consultants who approach meta-expertise in a disciplined manner, rather than leaving such inquiry to experts or legal decision-makers. Discursively, reliance on a disciplined mechanism of assessing the credibility and construction of expertise⁷⁹ appears to be a less arbitrary method of engaging with experts than imitating or selecting a particular self-referential form of expertise. If this suggestion is found to be persuasive, then there needs to be a change in the approach adopted in legal education, assessment of grant proposals by legal scholars and appointment of experts from investing in the honorific value of science and expertise to adopting a disciplined manner in interrogating the uses and abuses of expertise. Having said that, there is no reason to believe that STS (and related scholarly communities) would provide neutral mechanisms of assessing the performative nature of expertise by conducting specialised inquiries into meta-expertise. It is suggested that this problem of infinite regress may be arrested by turning the inevitable constitutive process of creating legal truth into a *process of creating desirable truths*.

Let us consider desirable truth-creation in the context of climate law.⁸⁰ Till *Massachusetts v. EPA*,⁸¹ the science of climate change was regularly challenged and tailored to suit political responsibility in the US. However, subsequently the legal category of air pollution was revised to allow for federal regulation of climate change. Why was that? While political arguments can be mooted, from the reasoning provided in the majority

⁷⁹ The Joint Research Centre of the European Commission has expressed an interest in STS; see: <https://ec.europa.eu/jrc/en/research-topic/science-and-technology-studies>. However, in specific or general regulations as well as in case law, there appears to be very little actual influence of STS and related inquiries.

⁸⁰ For an account of how testimonial studies could inform responsibility for climate change action despite climate scepticism, see Lorraine Code, ‘Doubt and Denial: Epistemic Responsibility Meets Climate Change Scepticism’ (2013) *Oñati Socio-Legal Series* 3.5.

⁸¹ 549 U.S. 497 (2007).

opinion, it appears that *the specific nature of climate change demanded converting the precautionary principle into a constitutive legal mediator* and interpreting all testimony – including expert legal testimony regarding federal division of powers – in that light. In *Massachusetts*, the Supreme Court of the United States did not peremptorily compel the Environmental Protection Agency (EPA) to regulate carbon dioxide emissions, it declared that the EPA may avoid doing so ‘only if it determines that greenhouse gases do not contribute to climate change’.⁸² Following a procedural approach to the precautionary principle,⁸³ the burden was put on the EPA to provide a ‘reasonable explanation’ regarding its inactivity vis-à-vis mitigation of carbon emissions. Thus, policy measures such as a carbon tax nor a cap-and-trade system, or ‘green consumerism’ are mediated by the precautionary principle, and expert testimony in this regard (from lawyers, economists, NGOs, political scientists, psychologists) is subject to normative scrutiny. It may now be asked, how is this normative scrutiny to be done without the mediator succumbing to epistemic capture (swayed by the attractions of a technical legal interpretation, a neat economic model)? This concern is not an abstract one – in relation to the precautionary principle, for instance, a compelling debate rages between the substantive content of the precautionary principle,⁸⁴ including what sort of reasoning is germane to the precautionary principle as applied to climate change.⁸⁵

I suggest that one approach to appreciating the constitutive nature of the process of interaction between law and expertise could be to identify moderators and mediators that function at the interface of expert input and normative ends.

⁸² Ibid, p. 533.

⁸³ See Roy and Woerdman, ‘Situating *Urgenda versus the Netherlands* within Comparative Climate Change Litigation’, *supra*.

⁸⁴ See Cass Sunstein, *Laws Of Fear: Beyond The Precautionary Principle* (Cambridge: CUP, 2006); Kahan, Slovic, Braman and Gastil, ‘Fear of Democracy’ *supra*; Cass Sunstein, ‘Misfearing: A reply’ (2006) 119 *Harvard Law Review* 1110.

⁸⁵ See Jacqueline Peel, ‘Precaution – A matter of principle, approach or process?’ (2004) 5 *Melbourne Journal of International Law* 483; Amy Sinden, ‘Formality and Informality in Cost-Benefit Analysis’ (2015) 1 *Utah Law Review* 93.

III. IDENTIFYING MODERATORS AND MEDIATORS AS TOOLS OF REDUCTIONISM

A. Law as Mediation

Legal practitioners conventionally associate the term ‘mediation’ with an institutional mechanism of alternative dispute resolution. However, in legal scholarship, the term assumes a more holistic understanding, integral to the property of legality itself. The most celebrated account of ‘law as mediator’ is the one forwarded by Joseph Raz. Underlying Raz’s scholarship is his position that there is no *a priori* obligation to obey the law;⁸⁶ rather, the authority of law needs to be justified in order to pose restrictions on the autonomy of individuals. Legal authority is justified or may be considered legitimate when it ‘mediate[s] between people and the right reasons that apply to them;’⁸⁷ billed as the Normal Justification Thesis. If this is the case, then people would do better to follow an authority than work things out on their own. To allow such a justified authority to do its work, some forms of contestation are foreclosed. That is to say, the authority may take *ex-ante* measures that exclude some of the reasons people have for their actions: this is Raz’s Pre-emption Thesis. The justification behind a legal institution or a legal decision – or the reason why an institution or decision may be construed to possess ‘practical authority’ – lies in its ability to mediate.

The Normal Justification Thesis and the Pre-emption thesis may justify the enterprise of BLE, as it offers a way we can achieve our best interests by allowing a group of experts to take over our conscious judgement and make policies accordingly. Further, such a group has the (legitimate) power to take away some of our ‘reasons for action’ – the mediator is not just a passive vehicle of the achievement of our thoughts and actions.

⁸⁶ This position has been labelled as a form of ‘philosophical anarchism.’ Some scholars have taken issue with the need for justification, claiming that if law is supported by collective decision-making, then there is no need to seek another justification. See Scott Hershovitz, ‘Legitimacy, Democracy and Razian Authority’ (2003) 9 *Legal Theory* 201.

⁸⁷ Joseph Raz, ‘Authority, Law, and Morality’ in *Ethics in the Public Domain: Essays in the Morality of Law* (Oxford: OUP, 1994), p. 214.

How does this process of mediation happen? On this issue there is limited guidance, as it is assumed that the legal authority uses its own imagination to figure out the relationship between ‘people’ and the ‘reasons’ they consider important. From this perspective, law seems like an administrative tool that implements the will of the people in the light of constitutional values. This, however, does not take into account the possibility that law interprets both people and values in its own image through normative reductionism; i.e. both democratic expression (including what constitutes democracy) and constitutional values are interpreted and reconstituted by legal agents. In other words, the power and influence of the mediator is underestimated.

The transformative potential of a mediator is taken a step further by Bruno Latour when he observes that mediators are those agents that brings all other actors, norms and objects into motion: ‘Mediators transform, translate, distort, and modify the meaning or the elements they are supposed to carry.’⁸⁸ For Latour, all truths are created through associations between animate and inanimate agents (or actants). Thus, the phenomenon of climate change, people and industries invested in a fossil fuel economy, social psychology laboratories, legal institutions would be transformed and defined by their association facilitated by a common mediator, say an EET policy. Latour claims that his enterprise is descriptive. He does not offer a normative philosophy behind his identification of mediators, or the associations formed, or the result of such associations. However, I would argue that there is a qualifier to Latour’s descriptive imagination, and that quite simply is the unique ethnographic position he adopts when he positions himself as an observer who identifies mediators and describes associations. Thus, it is his idiosyncratic anthropological-philosophical method of observation and description that influences the way a mediator is conceived and presented to the reader. Thus, notwithstanding his stated aversion towards adopting ‘explanations’ and ‘theories’ that inform his descriptive exercise, there appear to be unconventional context-transcending explanations that inform both the descriptive exercises he undertakes, as well as the lessons he derives from

⁸⁸ Bruno Latour, *Reassembling The Social: An Introduction To Actor-Network Theory* (New York: OUP, 2005), p. 39.

them.⁸⁹ This may explain why despite his startlingly insightful observations, Latour is prone to indifference and criticism by scholars working within the co-ordinates of their defined fields. In his more recent work, Latour admits that ideological choices need to be made for any social inquiry to have value; in relation to climate science, for instance, he sees the necessity to ‘pick sides’ before entering the laboratory. Thus, both implicitly in his identification of mediators, as well as expressly in relation to some areas of investigation, Latour relies on ways of putting into effect pre-textual reductionism. Similarly, the need to identify appropriate forms of expertise in the EU legal order and in the USA post-*Daubert* - and a parallel requirement in the assessment of expertise in legal scholarship in areas such as BLE - , necessitates an account of a qualifier to the process of mediation. This brings us to the conceptual device of a *moderator*.

B. Legal Justification as Moderated Mediation

I first started thinking about the term ‘moderator’ in relation to normative reductionism after auditing lectures in social psychology. Prior to that I did not see a conceptual difference between mediator and moderator. What I gathered from the lectures is that confusing the two would amount to confusing causal mechanisms conceptually, strategically and statistically.⁹⁰ In the most-cited article on the mediator-moderator distinction in causal⁹¹ analysis, Baron and Kenny argue that unlike a mediator, a moderator variable is stable, and not correlated with independent and dependent variables.⁹² In

⁸⁹ ‘All in all, Latour’s examination of the history of science shows some signs of implicit inclination towards such context-transcending explanations as limiting cases of other explanatory strategies.’ Jouni-Matti Kuukkanen, ‘Demystification of Early Latour’ in K. Francois, B. Lowe, T. Muller and B. Van Kerkhove eds. *Foundations Of The Formal Sciences Vii* (Bonn, 2009).

⁹⁰ Rueben M. Baron and David A. Kenny, ‘The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations’ (1986) 51 *Journal of Personality and Social Psychology* 1173.

⁹¹ The reader may correctly prefer the word correlation to causal, but as Kenny points out, mediation analysis becomes useful when we endeavour to conduct a causal analysis. David A. Kenny, ‘Reflections on Mediation’ (2008) 11 *Organizational Research Methods* 353, p. 356.

⁹² Baron and Kenny, ‘The Moderator-Mediator Variable Distinction in Social Psychological Research’, *supra*.

fact, it becomes important to decide on whether a moderator or mediator model is being tested, as the same variables can have moderation and mediation effects.

The conventional understanding of the relationship between a moderator and a mediator in statistical methods may be reconstructed as follows: If we seek to understand the relationship between independent variables and a dependent variable or outcome (say X), then the variable Y that has explanatory power over this relationship is a mediator. However it is possible to anticipate that another variable Z could modify⁹³ the outcome to X2, thereby affecting the relationship between X and Y. Z in this case would operate as the moderator. While testing for mediation has been standard in statistical methods for some time,⁹⁴ the standardisation of moderation has been a relatively recent phenomenon, primarily owing to a specialised programme developed by Andrew Hayes.⁹⁵ It may be noted that Hayes' work as well as other scholarship on the subject anticipates the possibility that the same variable can have both mediating and moderating effects.

The relationship between mediation and moderation may be appreciated by briefly engaging with a study on the role of religion and spirituality as

⁹³ In legal analysis, the term 'modify' would be used in a different manner than that understood in statistical analysis, where moderation effects are studied in relation to *strengthening or changing the direction of the relationship* between the other variables. As Miller, Judd and Yzerbyt explain, "Mediational analyses attempt to identify the intermediary process that leads from the manipulated independent variable to the outcome or dependent variable. The issue of moderation focuses on factors that influence the strength and/or direction of the relation between the treatment variable and the dependent variable. Moderational analyses attempt to identify individual difference or contextual variables that strengthen and/or change the direction of the relationship between the treatment variable and the independent variable." Dominique Muller, Charles M. Judd and Vincent Y. Yzerbyt, 'When Moderation is Mediated and Mediation is Moderated' (2005) 89 *Journal of Personality and Social Psychology* 852, pp. 852 – 853.

⁹⁴ Standardised testing of the significance of mediation usually heavily relies on the work of Michael Sobel. See Michael E. Sobel, 'Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models' (1982) 13 *Sociological Methodology* 290.

⁹⁵ A synthesis of his work can be found in Andrew F. Hayes *Introduction To Mediation, Moderation, And Conditional Process Analysis: A Regression-Based Approach* (New York: Guilford Press, 2013).

factors that affect the association between perceived stress and psychological health.⁹⁶ It was hypothesised that spirituality would be a mediator for those afflicted with anxiety to reach psychological adjustment. It was also hypothesised that religious commitment would moderate this relationship, or the strength of spiritual experiences as a mediator in affecting the psychological outcome. Any reader who (like myself) is sceptical of the way categories are defined would have a problem with the operational definition of all of these variables (anxiety, outcome, spiritual, religious) and the differentiation between them,⁹⁷ but my intention is to point out that the relationship between a dependent and independent variable may be usefully studied by identifying the mediators and the moderators. Further, as one of the authors of this study points out, ‘the influence of the moderating variable can be assessed in terms of the path from independent variable to mediator (e.g., the relationship between stress and spirituality) and/or the path from mediator to dependent variable (e.g., the relationship between spirituality and psychological adjustment).’⁹⁸ The study did not set out to prove the relationship between anxiety and adjustment, but merely asked *how*, and the way they went about asking how is by identifying the effects of a mediator and moderator.

I will not go more into detail regarding this study, as my intention was only to introduce the idea of mediation and moderation. I have since then found it in several contexts: whether the Capabilities Approach should moderate human engagement with nature,⁹⁹ how job autonomy moderates the mediating role of perceived leadership qualities in negotiating the

⁹⁶ Kirby K. Reutter and Silvia M. Bigatti, ‘Religiosity and Spirituality as Resiliency Resources: Moderation, Mediation, or Moderated Mediation?’ (2014) 53 *Journal for the Scientific Study of Religion* 56.

⁹⁷ Reutter and Bigatti are mindful of this limitation, especially with regard to the differentiation between religiosity and spirituality. *Ibid.*, pp. 68 – 69.

⁹⁸ Kirby K. Reutter, *The Effects of Spirituality and Religiosity upon Stress, Anxiety, and Depression: Mediation, Moderation, or Moderated Mediation?* PhD Dissertation, April 2012.

⁹⁹ Antje Brock, ‘The Environment in the Capabilities Approach: Why and how its constitutive role for capabilities matters’, paper presented at the 2014 Human Development and Capability Association Conference, Athens, August 2014.

relationship between personal traits and effective management,¹⁰⁰ the moderation of environmental informational mediators by biospheric values.¹⁰¹ The primary takeaway I have from such research is that the mediator affects the relationship between independent and dependent variables. Latour (relying on semiotics rather than statistical techniques) would argue that the mediator in effect defines the independent variables, the dependent variables and their relationship.¹⁰² However, as discussed in Section IV.A., there is no reason to trust the idiosyncrasies of a mediator. From a descriptive standpoint, a stable moderator has the power to distort the relationship between the independent variables and the mediator in predicting the dependent variable. Transposing this understanding onto normative reasoning, identifying and selecting desirable and undesirable interacting moderators could be how law engages in the creation of ‘desirable truths’. This way of reasoning is akin to developing a framework of *ethical moderation of epistemic mediation* in appreciating the relationship between law and justice.¹⁰³ There is an ethical concern that animates such a project – how legal institutions could respect feelings of injustice and articulations of justice that arise from a social order without defining it in its own image, or in the light of other principles.

How can we put this into practice? This question may appear odd, as a philosophical discussion on testimony does not provide guidance on the practice of epistemic reductionism, but on the *properties of the phenomenon of reductionism*. However, I can try to sketch out a discursive framework in relation to climate law.

¹⁰⁰ Kok-Yee Ng et. al., ‘Personality and Leader Effectiveness: A moderated mediation model of leadership self-efficacy, job demands, and job autonomy’ (2008) 93 *Journal Of Applied Psychology* 733.

¹⁰¹ Jan Willem Bolderdijk et. al. ‘Values Determine the (In)effectiveness of Informational Interventions in Promoting Pro-Environmental Behaviour’ (2013) 8:12 *PLoS ONE* e83911.

¹⁰² Statistically, Latour’s view may be considered equivalent to a complete mediating effect where the correlation between independent and dependent variables are eliminated when the mediator is controlled for. See Ali al Nima et. al., ‘Anxiety, Affect, Self-esteem and Stress: Mediation and Moderation Effects on Depression’ (2013) 8 *PLoS ONE* e73265, p. 2.

¹⁰³ Roy, ‘Justice as Europe’s Signifier’, *supra*.

C. Moderated Mediation of Climate Law

To return to our discussion on an EET scheme, it would be tempting to identify reduction of emissions as an *end* that is desirable, and the EET as a *means* to achieve this end. But this characterisation is not useful. What does it mean to have EET as a means? In a Razian framework, can EET be called a ‘reason that people value’? A policy measure that mandates individual engagement with climate change may be viewed as an infringement of one’s freedom to live a private life; but so could a preference for exposing the current and future generations to hazardous risk. The heuristic notion of balancing seeks to reconcile means and ends, and how such balancing occurs is the concern of the proportionality principle. But what is balanced, and how? What is the idea of risk that people have reason to value? Who is this ‘people’? And we are back to all the difficult questions about expertise and risk. What cannot be disputed is that there are factors, or variables, that shape a normative appreciation of means and ends. In other words, restricting normative discussions to means categories and ends categories is clearly not enough. It is essential to interrogate how variables influence how means and ends are normatively construed.

In relation to climate change generally, our dependent variable could be said to be reduction of emissions. This is the normative *end* which will inform all reductionism. The independent variable is expert testimony on *means*. Epistemic intervention requires the identification of moderators and mediators. What we do know from our discussion so far is that a moderator is not a specific characteristic of the exercise, but a variable that distorts. Mediators, on the other hand, are technologies or institutions that facilitate engagement. So applying this epistemic framework to climate policy, we get:

Drawing on the discussion in this section, mechanisms that operationalise or deploy means have been characterised as mediators, and value-preferences that have the potential to shape the relationship between the other variables have been characterised as moderators.

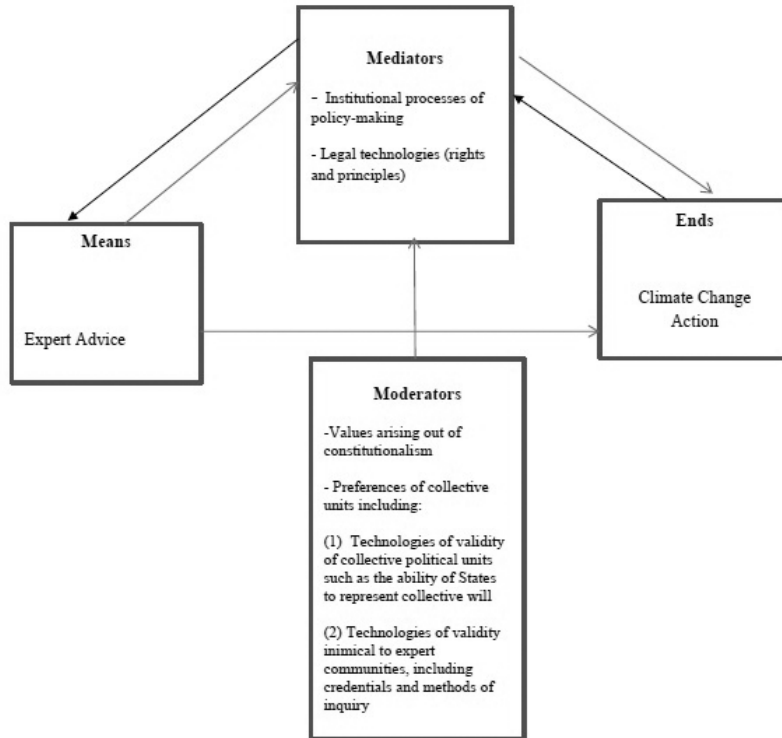


Figure 2: Mediators and Moderators of Climate Regulation

The mediating instruments and institutions have lives and epistemologies of their own and shape the way both means and ends come into play by association. The two-way relationship of mediators with both means and ends represented above is significantly different from its representation in statistical design, as it captures both the associational importance of mediators (per Latour) and the role of law as mediator (per Raz). It is also suggested that such mediators are prone to distortion by moderators. Legal reasoning – owing to the authority of the law to reduce complexity and create truth by – seeks to arrive at a *desirable distortion* while negotiating expert input and political choices. In the process of such reductionism, it would be necessary to be mindful of other distortionary forces.

The inadequacy of viewing climate law solely within means and ends is evident in the commentary¹⁰⁴ around *Urgenda*¹⁰⁵ where the Court directed the government to adopt higher reduction targets. Queries were raised (the government has sought to file an appeal at the time of writing this book¹⁰⁶) about whether the *end* of global climate mitigation justified the Court taking over the *means* of the political process. It is only when the *mediating effects* of the precautionary and prevention principles are invoked, and the *moderating force* of the epistemic authority of international climate governance (the Court defers to the findings of the Intergovernmental Panel on Climate Change) and constitutional discourse on protecting the individual from endangerment (the Court combines the jurisprudence of the European Court of Human Rights as well as Dutch precedents), that the ‘truth-creation’ by the Court can be grasped.¹⁰⁷ To clarify, I do not necessarily endorse the mediators and moderators of the Court’s reasoning, but seek to demonstrate that the reasoning of the Court becomes easier to understand and contest. It may be asked why I may have (somewhat controversially) characterised legal principles, and especially rights, as mediators. Drawing on the fact that the inviolability of rights in any legal system are either not absolute¹⁰⁸ or at best open to interpretation, rights –along with principles – operate as legal technologies for arriving at an outcome. In the process of justification, reasoning about rights is constitutive; the contours of rights are created during the process of reasoning. To ensure that such reasoning is directed towards a particular way or ‘desirably distorted’, it would be more useful to ensure that such interpretation is in keeping with values integral to constitutionalism, such as freedom and equality. This is why in *Urgenda*, the interpretation of the

¹⁰⁴ See for instance See James Huffman, *Global Warming goes to Court*, available at: <http://www.hoover.org/research/global-warming-goes-court>.

¹⁰⁵ *Urgenda v. Government of the Netherlands*, *supra*.

¹⁰⁶ The official announcement is available at: <https://www.rijksoverheid.nl/documenten/kamerstukken/2015/09/01/kabinetsreactie-vonnis-urgenda-staat-d-d-24-juni-jl>.

¹⁰⁷ For a review of the arguments, see Roy and Woerdman, ‘Situating *Urgenda v The Netherlands*’, *supra*.

¹⁰⁸ For a debate on whether some rights are absolute in the European legal order, see Stavros Tsakyrakis, ‘Proportionality – An assault on human rights?’ (2009) 7 *International Journal Of Constitutional Law* 1; Madhav Khosla, *Proportionality an Assault on Human Rights?: A Reply* (2010) 8 *International Journal Of Constitutional Law* 298; Stavros Tsakyrakis, ‘Proportionality an Assault on Human Rights?: A Rejoinder to Madhav Khosla’ 8 *International Journal Of Constitutional Law* 307.

Right to a Private Life was moderated by the value of protecting the individual from endangerment, rather than the State's political determination of climate targets¹⁰⁹ (this moderator will be discussed in more detail in Chapter 7).

With respect to a regulatory appreciation of a specific instrument such as the EU ETS or a proposed EET rather than climate action per se, the analytical device of interacting mediators and moderators may prove to be useful. In distinguishing the EU ETS from climate policy in Japan and the United States, José Manuel Barroso (the former President of the European Commission) had stated that what is needed for the EU ETS to succeed is not 'technology and goodwill' but 'a binding emissions cap to put a real price on carbon and give the right incentives for environmentally-friendly technologies'.¹¹⁰ To this end, what is crucial, therefore, is to allow the emissions cap (or a quantity mechanism) to operate as the determining factor in the trajectory of EU climate policy. The 'environmental scarcity' included in the price of an allowances is arguably the primary defining feature that distinguishes a cap-and-trade system from other competing mechanisms, such as (emission standard-based) credit trading systems.¹¹¹ This is why advocates of upstream mechanisms of dealing with climate change are also critics of the EU ETS, as there is the apprehension that the technologies of determining a price (such as secondary markets) effectively render the EU into a price rather than a quantity mechanism.¹¹² What this criticism unfortunately overlooks is that the clear distinction between price and quantity mechanisms is not useful in practice. The EU ETS is a policy instrument that operates as a price *and* quantity mechanism. The endeavour should instead be to ensure that the market-based price mediator is stabilised and 'desirably distorted' by the moderating effect of a quantity-based fixed cap in keeping with minimum emissions targets. This understanding informs the avoidance of an exclusive focus on either fairness or efficiency in Chapter 5 (as

¹⁰⁹ *Urgenda*, para 4.49.

¹¹⁰ "Barroso Defends EU's Climate Strategy", ENDS EUROPE DAILY, Issue 2399, Oct. 2, 2007, available at: <http://www.endseuropedaily.com/articles/index.cfm> (last visited May 28, 2015).

¹¹¹ Edwin Woerdman, 'Path-dependent Climate Policy: The history and future of emissions trading in Europe' (2004) 14 *European Environment* 261, pp. 267 – 268.

¹¹² Shaun Chamberlin, Larch Maxey and Victoria Hurth, 'Reconciling Scientific Reality with Realpolitik: Moving beyond carbon pricing to TEQs – an integrated, economy-wide emissions cap' (2014) 5 *Carbon Management* 211.

these are both mediating principles), and leads to the characterisation of the EU ETS as a liability-based instrument with an implementing market mechanism.

When it comes to an EET scheme, behavioural biases may mediate the operation of incentives; as to whether such biases may be shaped or capitalised on is more a question of how the responsiveness and freedom of participants (including the freedom from responsibility, and the freedom to pursue lives without the threat of hazardous risk) is construed, which is tied to the question of the external validity of BLE. As discussed earlier, it is not necessary for a discipline or manner of expert inquiry to have acquitted itself of all charges of internal validity to be useful,¹¹³ but the findings would have to satisfy external validity, and this is where a testimonial approach to legal reductionism becomes important. In this regard, following the discussion in Section III.B and Section IV, mediators including expert findings on behavioural biases of individuals have the potential to shape the legal truth of justifying a policy instrument such as EET. We have also seen the need to identify positive and negative distortions of the truth-creating potential of mediators. We could view the interacting variables in the EU ETS and EET as follows:

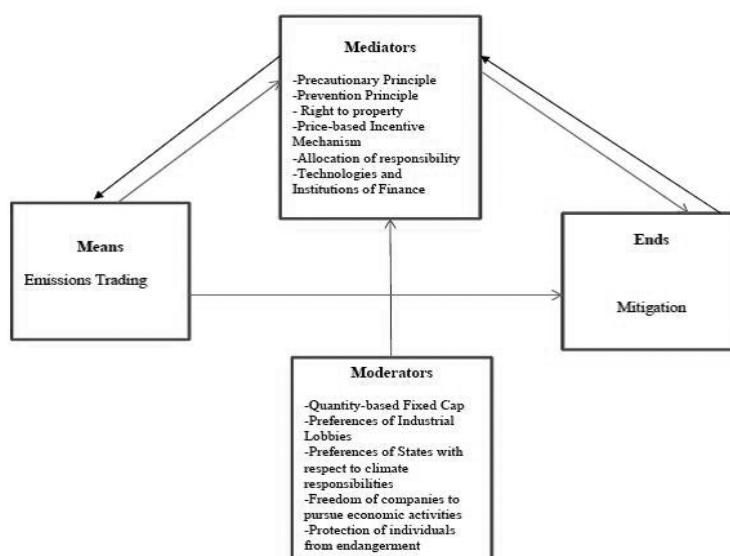


Figure 3: Moderators and Mediators of ETS

¹¹³ See the discussion in Section III.A.

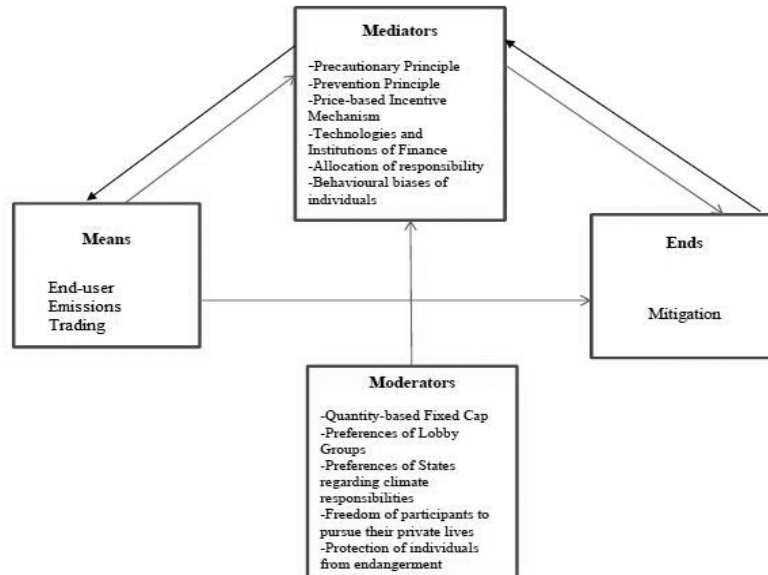


Figure 4: Moderators and Mediators of EET

A couple of issues need to be clarified in relation to the EU ETS and EET. Firstly, the logic of economic activity that defines companies and industries in the EU ETS is not true for a EET. This is brought out in the reasoning of the General Court regarding whether the EU ETS infringes on Arcelor SA’s right of property, its freedom of establishment and its freedom to pursue an economic activity.¹¹⁴ Per the Court, as the contested provisions of the EU ETS directive did not result in ‘substantial negative economic consequences’,¹¹⁵ there was no infringement of the rights of Arcelor SA. Consequences of a policy on a company’s freedom are viewed in an economic paradigm, while that would not be the case for individuals (as discussed in Chapters 4 and 7). Further, while for the EU ETS that covers industries, it may seem obvious that industry lobbies may moderate or distort decision-making in relation to climate policy, or influence the resolution of climate disputes. The same does

¹¹⁴ Case T-16/04 *Arcelor v. European Parliament and Council of the European Union* [2010] ECR II-211, para 175.

¹¹⁵ Case T-16/04, para 168.

not seem obvious for the EET. This does not mean that the EET is free from public choice considerations; industries may lobby in favour of transferring responsibility to individuals. In addition, associated interests in relation to a EET scheme such as climate-friendly products and equipment would try to have a say. I do not suggest that the electric car lobby (for instance) has as much bargaining power as the fossil fuel lobby, but only that they would seek to promote their interests. This line of reasoning is developed in detail in Chapter 5.

Admittedly, the above framework does not satisfactorily provide a sacrosanct analytical model to solve the problem of 'coexisting and divergent paradigms' of expertise discussed in the first few pages of this article. However, it does provide a first step in categorising and negotiating expert testimony.

IV. CONCLUSION

This heavily conceptual chapter was drafted in response to a practical concern: how to identify and utilise relevant forms of scientific research in reasoning about a proposed regulatory measure such as the EET. While attempting to address this concern, I encountered three problems. First, the methodological and disciplinary orientations of social scientists result in them talking past each other. Second, the privileging of disciplines and sub-disciplines within a discipline appears to be as political a process as the formulation of legal principles. Third, by virtue of its nature, law reduces complexity to suit its self-contained system. To do so, it seems to internalise some disciplines (and sub-disciplines) or potentially disregards disciplines to suit pre-determined political purposes. These three problems pointed to a gap in how an external point of view is translated into legal inquiry, and therefore any claim to reason based on an internal or external view may be nothing more than a claim to scientific or political authority.

This chapter suggested looking at appreciation of expertise as Testimony. In the process, it highlighted some features of Testimony as a discipline in itself, identifying reductionism as a property of testimony in law, owing to truth-creation through legal decision-making. It was then suggested that reductionism or truth-creation is constituted by mediators, and that the power

of mediators is moderated or ‘desirably distorted’ in law. This framework was then applied to climate regulation in general and EET specifically. This framework prompts analytical exercises in understanding the relationship between empirical findings and regulatory choices, as is evident in the chapters that follow.



4

PUBLIC RESPONSIVENESS: AN EXPERIMENTAL STUDY*

4

I. CONCEPTUALISING 'CONTEXTUAL PUBLIC ACCEPTABILITY' AND 'PUBLIC RESPONSIVENESS'

A. The Current Conceptual Framework

In Chapter 2, the importance of political and public acceptability was highlighted. Recent work on PCT restates the importance of these two factors.¹ In the introductory discussion on the EET, in the PCT Report as well as recent work on TEQs,² the concept of public acceptability has not been interrogated. I will seek to do so in this chapter, and in the process demonstrate why the literature on direct engagement of individuals with climate regulation is not only incomprehensive, but does not take into account an understanding of the 'public' that could assist in moving towards a comprehensive framework. Specifically, I will seek to show the difference between *public acceptability of a policy*, *public acceptability of a system* and *public responsiveness*, and argue that

* The themes discussed in the section on 'Drawing Inferences' in this chapter have been developed in Suryapratim Roy, 'Agency as Responsiveness', EUI Working Paper 2016/04.

¹ Yael Parag and Tina Fawcett, 'Personal carbon trading: a review of research evidence and real-world experience of a radical idea' (2014) 9 *International Journal of Nanomedicine* 1883.

² Chamberlin et. al., 'Reconciling scientific reality with realpolitik', *supra*.

the acceptability of a system and responsiveness are crucial considerations of understanding how people engage (and can potentially engage) with climate instruments.

The concentration in the literature on instruments analogous to the EET (such as PCTs and TEQs) regarding public acceptability has been on perceptions and attitudes of people towards such a policy, collected through surveys and interviews.³ Even studies that have employed an ‘experimental’ perspective betray a reliance on stated preferences. In the Bristow et. al. study contrasting the public acceptability of a carbon tax and a PCT, respondents are directly asked questions about technical properties of climate instruments.⁴ In a study done by leading psychologists working on PCT systems on different carbon instruments, reliance is placed on how people react to differently framed questions.⁵ Even in the exciting Norfolk ‘field experiment’, the central research outcome from a baseline study is perceived usefulness and perceived ease of use of a PCT based on self-reports on attitudes.⁶

The reasoning in the above literature has been that if people find a policy to be fair and workable, then there could be an expectation that the policy will

³ L. Owen, L. Edgar, S. Prince and C. Doble, *Personal Carbon Trading: Public Acceptability: A report to the Department for Environment, Food and Rural Affairs* (DEFRA: London, 2008); Abigail L. Bristow, Mark Wardman, Alberto M. Zanni, and Phani K. Chintakayala, ‘Public acceptability of personal carbon trading and carbon tax’ (2010) 69:9 *Ecological Economics* 1824-1837. Specifically in relation to PCT and road transport, see Helen Harwatt, Miles Tight, Abigail L. Bristow and Astrid Guhnemann, ‘Personal Carbon Trading and Fuel Price Increases in the Transport Sector: An exploratory study of public response in the UK’ (2011) 47 *European Transport* 47-70. Harwatt et. al. consider use ‘interviews’ and ‘behavioural response’ interchangeably. Even PhD dissertations that employ qualitative research to explore incentive-based household emissions have restricted their focus to surveys and interviews. See Andrew Athall Wallace, *Reducing Carbon Emissions by Households: The effects of footprinting and personal allowances*, PhD Dissertation, University of Southampton, 2009.

⁴ Bristow et. al., *Ibid.*

⁵ Yael Parag, Stuart Capstick and Wouter Poortinga, ‘Policy Attribute Framing: A comparison between three policy instruments for personal emissions reduction’ (2011) 30:4 *Journal of Policy Analysis and Management* 889-905.

⁶ In fact, the authors note that ‘individuals’ values and beliefs do not correlate with their actions. This gap is especially prevalent in environmental policy where environmental beliefs do not always translate into behaviours and actions’, Hendry et. al., *supra*, p. 110. They clarify that this gap is not something that has been tested in their study.

be adhered to. Some scepticism about this view had already been expressed in Chapter 2 when it was suggested that expressed attitudes are not always a robust indicator of actual behaviour. But a suggested shift from the current appreciation of the 'public' could be met with a compelling objection – is it not somewhat patronising to tell people that they don't know themselves? I will seek to address this objection in the following two sections.

B. Contextualising Public Acceptability

When I say I have a certain preference for a carbon policy instrument, my statement has the backing of selective information, experiences, influences and interests. However, the law respects peoples' choices, and therefore allows people to have these views. The best manifestation of such respect is the fact of voting through adult franchise. Though there are countless studies in several disciplines on the way voters are influenced, the law still respects the fact of voting. However, it could be argued that peoples' stated preferences and opinions about climate policy are not exhaustive of their choices, as in addition or despite their preferences, they might expect the law to free them of the risk of climate change. This is different from the act of voting, where there is an assumed equivalence of preferences and choices. This is also in keeping with the Razian point of view discussed earlier that law's legitimacy lies in fulfilling what we have reason to value. Thus, there is a possibility for the law to compel engagement *despite stated preferences*. I will explore this idea in more detail in Chapter 7. Now we concentrate on the idea that *the appreciation of peoples' stated preferences* may be influenced by factors that are not directly inquired about.

In this regard, I'm trying to invoke the idea that associating with the technology of assessment leads to the formulation of the stated preference. Thus, the manner of soliciting preferences through the survey method, semi-structured interviews, and other such methods invariably influence the responses given.⁷ Admittedly, qualitative research provides several tools to rein

⁷ In charting out the common threats to validity in social science research, Pelham and Blanton put it quite succinctly: 'the process of studying people changes people.' Brett W. Pelham and Hart Blanton, *Conducting Research in Psychology: Measuring the weight of smoke* (4th International Edition, Wadsworth, 2013), p. 130.

in researcher bias, and also addresses the specific issue of framing questions. I do not seek to question the rigour of the methodology employed by researchers who have examined the public acceptability of climate instruments. I instead question whether *asking about an instrument in itself* is useful for a comprehensive assessment of public acceptability, as such questions are silent about context. Undoubtedly, unlike some of the studies such as the comparison of public acceptability of a PCT and a carbon tax, the ‘experimental’ studies have engaged in providing a context, such as the Capstick-Lewis endeavour to situate such questions within individual dispositions to environmental issues.⁸ However, all these studies had no interest in contextualising the normative basis of the incentive mechanism, i.e. how the respondents felt about the legitimacy of the authorities and reference groups involved in designing and implementing a norm. Drawing on Tom Tyler’s work on moving away from law’s deterrence models to motivation systems, it appears that ‘willing acceptance’ depends on ‘the extent that people view the law as (a) legitimate and (b) consistent with cherished moral values.’⁹ Ideally speaking, there should be congruence between moral values and legal rules; however assuming that not everyone¹⁰ shares the moral values that a particular law is based on, trust and confidence in the legal authority that makes particular decisions and policies is a crucial factor for public acceptability.¹¹ Tyler uses surveys and interviews in his studies, and the key takeaway is that unless there is perfect congruence of internalized moral values and the aims of a particular policy, then context becomes important. This context in Tyler’s work applies to the perceived legitimacy of the authority in the eyes of the public that would be involved in

⁸ Capstick and Lewis, ‘Personal Carbon Allowances: A Pilot Simulation and a Questionnaire’, *supra*.

⁹ Tom R. Tyler, *Psychology and the Design of Legal Institutions* (Nijmegen: Wolf Legal Publishers, 2007), p. 22.

¹⁰ In fact, Tyler makes the critical point that if legal authorities can successfully bring about a congruence between legal rules and value-based motivations, then this could easily allow for the isolation of the minority population that do not share these critical values. *Ibid*, p. 32.

¹¹ See the discussion on legitimacy, *Ibid*, pp. 23-26. In his earlier work, Tyler empirically charts the finding that procedural fairness (as against outcome) is perceived to be the most important component of trust and confidence in an authority for non-contractual engagements with legal authorities. Tom R. Tyler, ‘Procedural Fairness and Compliance with the Law’ (1997) 133 *Swiss Journal of Economics and Statistics* 219-240.

making and implementing the norm. A similar concern prompts Tjernstrom and Tietenberg to develop a model for capturing variables that mirror the context in assessing attitudes towards specific attributes of climate policies, with the conclusion that: “*Since attitudes toward public and global goods are so important in the formation of one’s attitudes on climate change, and therefore also nations’ policies, they will also be closely associated with people’s beliefs about the role of government and of international organization.*”¹² Assessments of attitude towards context are sorely lacking in studies on direct individual engagement with climate change policies, and would be a much better indicator of public acceptability.

From the above, it appears that surveys that enquire about a particular policy are incomplete if they do not inquire the authorities involved in policy-making and implementation. In case of a downstream climate initiative, this would be the level of government responsible for law-making and agents involved in different levels of implementation. Indeed explicitly inquiring about these factors could lead to a certain form of ‘framing’, but drawing on Tyler and the Sunstein-Thaler injunction that no opinion or choice exists in vacuum,¹³ such framing happens anyway. In responding to a survey question, an individual has the weight of an internalised context inside him. In addition to the legitimacy of authority, there is another crucial contextual variable that I would like to discuss; this is *perceived association with other policies* in which a particular regulatory or legal intervention finds itself. At various points in the book, the relationship of a climate policy with other policies is discussed. In Chapter 3 we considered the idea that perhaps an EET policy could be a way to achieve energy efficiency through the back door. In Chapter 5 we will look at the relationship of an EET with the EU ETS and other potential climate policies that engage the individual. In Chapter 6 we will look at the association of climate policies between the EU and Member States. Importantly, such

¹² Emila Tjernström and Thomas Tietenberg, ‘Do Differences in Attitudes Explain Differences in National Climate Change Policies?’ (2008) 65:2 *Ecological Economics* 315-324.

¹³ As Sunstein and Thaler argue, non-institutional fetters on freedom of choice are inevitable. s Sunstein and Thaler, ‘Libertarian Paternalism Is Not an Oxymoron’, *supra*, fn 11.

association is not only with goals and aims, but particular events¹⁴ or laws. Given that the relationship between different instruments is mediated by several institutional factors and different policies, could it not be that people informally associate a particular climate regulation with factors that may not be ‘rationally relevant’?

To return to the studies on EET and ancillary instruments done till now, assessing attitudes towards context appears to be a much-needed attribute of getting a hold on public acceptability. The reason why such an endeavour is required is not because this is my subjective opinion of good qualitative research practice, but that – much like Tyler – my concern is whether acceptability has a bearing on behaviour, or compliance with policies. Compliance with an EET or a variant that seeks to directly engage individuals in climate policy requires robust and continued engagement to reduce a higher amount of emissions as a lower cost. Thus, given attitudes about context has a strong propensity to bear on compliance, the assessment of such attitudes should play an integral part of a *preference-based approach* to assessing the role of the public.

C. Public Responsiveness

The concentration in the above section has been to arrive at a preference-based approach that would allow policy-makers a better hold on the relationship between public acceptability and compliance. Indeed, following Tyler above, the way a person rationalises her engagement with a climate instrument may have a bearing on the way she actually engages with such an instrument. However, this is only part of the story. The fact and nature of rationalisation for our purposes plays an instrumental role in actual behaviour; thus, what we are more interested in is *public responsiveness* towards a particular policy instrument.

Following the primary BLE insight that an individual may not behave in a manner that is best for herself, I would like to suggest that climate law may require an understanding of means of law whereby it may be justified to

¹⁴ My colleagues have sought to specifically examine the interactions between energy and carbon markets using an event-study approach. See Thijs Jong, Oscar Couwenberg, and Edwin Woerdman, ‘Does EU Emissions Trading Bite? An event study’ (2014) 69 *Energy Policy* 510.

intervene by assuming that people do not know themselves,¹⁵ whereby the epistemic basis of any policy initiative or judicial decision does not need to be grounded in public opinions and perceptions. The epistemic basis for a policy could therefore be situated in how people behave instrumentally in response to climate change, rather than what they think should be an appropriate way to behave, or what they see is an appropriate response to reducing emissions. This, of course, assumes that there is need for such intervention (including the normative basis of the manner of intervention), which is a complex issue, and animates most of this book. But if we were to assume that it is necessary to engage individuals directly to reduce emissions (as we shall discuss in Chapter 7), then perhaps it is important to concentrate on *how the public responds rather than judging an intervention to be acceptable by the public*. This brings me to the question posed at the very beginning of this book – does my opinion as a citizen or a consumer or a producer matter?

From a conventional¹⁶ jurisprudential perspective, it is not necessary for law to be tried in the court of public opinion; i.e. the internal position of law (and officials who endorse and implement the ‘rules of recognition’) is independent of what individuals within a particular legal system think. Legal philosophers who disagree with each other regarding whether law is a social fact, or needs to be grounded in morality to have a claim to correctness, nonetheless agree that law does not need to correspond with public opinion. At the same time, the EU now stresses on the importance of public opinion;¹⁷ and considers public consultation to be an important part of legal decision-making. However, a distinction needs to be made between *public consultation* for decision-making and *public opinion*. The former has been considered in Chapter 3, as to the way of selecting, appreciating, and using appropriate consultation is an exercise in legal reduction of testimony. Public opinion, on the other hand, is usually not considered for testimonial purposes, but confers

¹⁵ Calabresi, ‘The Decision for Accidents’, *supra*, p. 743.

¹⁶ By conventional jurisprudence, I refer to mainstream jurisprudence that draws on analytical philosophy, with scholars such as H.L.A. Hart and Ronald Dworkin being the foremost authorities on the subject.

¹⁷ For an overview, see Salvatore Signorelli, ‘The European Union in Touch With its Citizens: The analytical tools of public opinion’, *Notre Europe Policy Brief*, No 34, March 2012.

democratic legitimacy on policies. Indeed, a poll appears to be a convincing proxy for democracy, as it is akin to adult franchise and conducting issue-based referendums. However, given that public opinion is susceptible to different forms of capture,¹⁸ a *formal right to have an opinion* as a signifier of democracy betrays a preference for a dispositionist¹⁹ view of the liberal individual; this is something that social theorists have been at pains to refute by offering constructivist accounts.²⁰ In addition to the difficulties with trusting public opinion (or identifying the forces that shape such opinion), there is considerable research to suggest that there isn't a strong positive correlation between stated preferences regarding climate change and actual behaviour. At the cost of oversimplification, this is primarily why behavioural studies resonates with scholars who work on regulation: the idea that choices do not correspond with judgements and that choices are not made autonomously provides added impetus to regulatory intervention.²¹

Taking the above into account, it is suggested that public opinion may not be a reliable method of appreciating actual public behaviour, and therefore responsiveness to a climate change initiative would not be adequately assessed through survey-based research. At the same time, actual public engagement is

¹⁸ The most obvious among which is capture by different forms of media. Claes de Vreese and Hajo Boomgaarden, 'Media effects on public opinion about the enlargement of the European Union' (2006) 44 *Journal of Common Market Studies* 419. For a comparative view on how public opinion regarding climate change is subject to political capture, see Steven R. Brechin, 'Comparative Public Opinion and Knowledge on Global Climatic Change and the Kyoto Protocol: The U.S. versus the World?' (2003) 23:10 *International Journal of Sociology and Social Policy* 106.

¹⁹ A preference for a situationist account over a dispositionist account of human behaviour is found in Jon Hanson and David Yosifon, 'The Situation: An introduction to the situational character, critical realism, power economics, and deep capture' (2003) 152:1 *University of Pennsylvania Law Review* 129.

²⁰ In Bourdieu's famous critique of ethnographic practice, for instance, he finds that people's thoughts and opinions are moderated by an internalised discourse of power, or *doxa*, whereby 'every established order tends to produce ... the naturalisation of its own arbitrariness.' Bourdieu, *An Outline of a Theory of Practice*, *supra*, p. 164.

²¹ See for instance On Amir and Orly Lobel, 'Stumble, Predict, Nudge: How behavioural economics informs law and policy' (2008) 108 *Columbia Law Review* 2098.

crucially instrumental to the effectiveness of an EET scheme,²² which makes it imperative to assess actual responsiveness to such a policy initiative.

II. THE EXPERIMENTAL TURN

I wish to clarify at the outset that there is a distinction between legal experiments and the use of experiments to explain legal issues, and assist with legal decision-making. Legal experiments refer to experimental regulation common to the European legal order as discussed in Chapter 6. The EU ETS, for instance, has been characterised as ‘a giant experiment in law and economics’²³ owing to its ‘learning by doing’ feature, but the explanatory power of an experimental study on the nature of incentives – as I endeavour to carry out and describe in this section – cannot be characterised as such. Before I proceed with the particulars of my study, it may be asked *why experiments should be conducted at all* in relation to the issues studied in this contribution, and *what sort of experiments* could have explanatory power.

With regard to why use experiments at all, the alternative approaches derived from the social sciences could be roughly categorized into the following²⁴: a) Laboratory Experimentation, b) Field Experimentation, c) Survey-based Research, and d) Observation & Introspection. The travails of survey-based research have been discussed above, and will not be repeated here. In relation to ‘observation & introspection’, while this method is certainly strongly susceptible to researcher-bias, I find it difficult to discount this component primarily because I think there are analytical issues which are not adequately considered in positivist experimental work, and which may affect the findings of such work. Deliberative introspection on a subject

²² For the importance of robust public engagement for mandatory individual engagement with climate regulation, see Gill Seyfang, Irene Lorenzoni and Michael Nye, ‘Personal Carbon Trading: a critical examination of proposals for the UK’, Tyndall Centre Working Paper 136, August 2009, p. 14. Available at: <http://www.tyndall.ac.uk/sites/default/files/twp136.pdf>.

²³ See Chapter 2.

²⁴ For a typology of various research methods commonly used, reliance has been placed on Richard Singleton and B. Straits, *Approaches to Social Research* (5 ed. New York: Oxford University Press, 2010). What is missing in such standard texts is distinguishing the use of such methods by proponents of different disciplines among the social sciences, notably economists and psychologists.

where the descriptive and the normative are intertwined is unavoidable, as is evident from this book. Observation and introspection, however, would likely be far too wedded to contextual ways of seeing and assessing a phenomenon in providing a generalizable view on how people behave; indeed, the whole of BLE is premised on the idea that just because economists want to believe that people are rational does not mean that they actually are. This leaves us with experiments.

There is a clear possibility that field experiments²⁵ would reflect how an EET might work in the real world more than laboratory experiments. However, to assess particular and distinct components of such a scheme, a laboratory setting may be more suitable, and it is the identification and testing of such components that this chapter concentrates on.

As far as laboratory experiments are concerned, there are two primary methods, *economic experiments* and *psychological experiments*. It may appear that the field of behavioural economics has combined these two approaches into one. Not so. Following Daniel Kahneman's lead, BLE has concentrated primarily on using psychological experiments to understand economic issues. Some other advocates of the experimental method working in the legal academia have sought to highlight the importance of economic experiments, following an approach pioneered by another Nobel-prize winning economist, Vernon Smith.²⁶ Though the assumptions and approaches of the two methods are quite different, there are substantial possibilities for combining the two. We will briefly discuss the two approaches below, before analysing their application to our current study.

Muller raises the question as to why we should conduct experiments in economics. In response, he offers: "*Ultimately, we wish to test whether the predictions developed through a priori economic reasoning can safely be applied in field conditions that are generally much more complicated than the abstract environment in which the theorizing occurred...experiments are conducted to*

²⁵ The Norfolk experiment to date has not declared results that would qualify as a 'field experiment' as the concentration has been on stated preferences. Hendry et. al., 'Influences on Intentions to Use a Personal Carbon Trading System', *supra*.

²⁶ See for instance Leonard S. Hyman, 'The California Story and its Impact on the Future of Electricity' (2001) 12 *International Energy Law & Taxation Review* 264.

provide the investigator with control over the conditions under which data are collected".²⁷ He further characterizes laboratory experiments as 'a cheaper complement for field experiments'.²⁸ While this provides an argument for why laboratory experiments may be preferred over field experiments, compelling arguments may be made against such preference, which we shall address in the sections on field experiments. The other question which deserves to be addressed here is what distinguishes economic experiments from psychological experiments, given that laboratory experiments in the social sciences have historically largely been the preserve of psychologists. To answer this question, it would be useful to briefly look at the development of economic experiments.

Edward Chamberlin is credited with publishing the first economic experiment with students in his class at Harvard to show that there is a difference between the outcomes of exchange among students (who tended towards monopolistic behaviour) as against the theoretical predictions of the laws of equilibrium.²⁹ Thus, Chamberlin used experiments as an ancillary pedagogic tool to demonstrate the inadequacies of economic models. Vernon Smith, one of the students who participated in Chamberlin's experiment, subsequently sought to disprove this conclusion by changing the 'system design' under which trading occurs (primarily by introducing a centralized information system and repetition of the experiment) – he believed that if the context of a laboratory experiment mimics the institutional structures that are present in the real world, then the behaviour of the participants would result in the same conclusions as suggested by conventional economic models. Smith identifies the following as the 'most important implication of experimental economic research':

"What is imperfectly understood is the precise manner in which institutions serve as social tools that reinforce, even induce individual rationality. Such

²⁷ R. Andrew Muller, "Experimental methods for research into trading of greenhouse gas emissions", Workshop on Understanding the Design and Performance of Emissions Trading Systems for Greenhouse Gas Emissions, Resources for the Future, January 15, 1999.

²⁸ Ibid.

²⁹ For a historical look at the development of experiments in economics, see Ted Bergstrom, 'Vernon Smith's Insomnia and the Dawn of Economics as an Experimental Science', (2002) 105 *Scandinavian Journal of Economics* 185.

economic concepts as noncooperative equilibrium and incentive compatibility are helpful, but they are inexorably static and do not come to grips with the interactive process between agents and institutions. One misses all this in research limited to the individual expressing an opinion about described situations and alternatives.”³⁰

Thus, from the above it appears Smith considers basic economic models as lacking institutional complexity, and is critical of a stated preference approach (found in psychological surveys) due to non-mindfulness of the effects of institutional influence. It may be noted that though both Smith and Herbert Simon are concerned with institutional influence, there is a crucial difference between the two: while Smith seeks to alter institutional conditions in order for participants to approximate rationality models. Simon on the other hand seeks to alter organisational design in order for personnel to reach organisational rationality.³¹ In this regard, Smith’s work is closer to Kahneman’s as they both seek to study rational models, with the key difference that Smith is more interested in institutional design while Kahneman is more interested in individual biases. Interestingly, while Vernon Smith shared the Nobel Prize with Daniel Kahneman, he has been critical of the work conducted by behavioural economists, where there is a more pervasive presence of psychological research. Most importantly, Smith appears to disagree with the project of behavioural economics to fill in the gaps of people in rational decision making, where psychological studies inform an otherwise uninformed decision maker. Smith demonstrates through his experiments that the level of information or intelligence is irrelevant for the purpose of arriving at rational economic decisions given certain institutional settings.³² Further, he finds Tversky and Kahneman’s famous study on the negligible effects of monetary benefits on behaviour problematic, suggesting

³⁰ Vernon Smith, ‘Rational Choice: the contrast between economics and psychology’, (1991) 99:4 *The Journal of Political Economy* 877.

³¹ Given Simon’s view is often misunderstood, I take the liberty to quote him at length: “... *there are limits to human rationality, and that these limits are not static, but depend on the organizational environment in which the individual’s decision takes place. The task of administration is to design this environment that the individual will approach as closely practicable to rationality (judged in terms of the organisation’s goals) in his decisions.*” Herbert A. Simon, *Administrative Behavior* (New York: Macmillan Company, 2nd ed. 1957), p. 240.

³² *Ibid*, p.887

that variations in level of rewards and the nature of rewards can well influence behaviour. In one of his modifications of his first trading experiment to see if buyers and sellers arrive at a competitive equilibrium, Vernon Smith found that inexperienced subjects converge towards rational behavior more rapidly as the size of rewards increase.³³

Following the above line of reasoning, the experiments that have been conducted on emissions trading have sought to prove/disprove the efficiency of emissions trading.³⁴ Also, given Smith's major innovation of capturing institutional factors, experiments try to test existing and proposed institutional features. It would also appear that it would be useful to conduct experiments related to end-user emissions trading if the context of the experiment approximates institutional settings. Thus, in relation to an EET scheme, there could be several institutional factors which could be tested such as the comparative efficiency of participant behaviour in a free-trading mechanism v. an auction mechanism, the informational advantages of actors who have participated in similar schemes or those with a comparatively higher level of financial literacy, or an experiment that manipulates the size of rewards as a motivating factor.

It may appear from the above that any future experimental work with respect to an EET scheme should rely on the economic-experimental turn. However, this may prove to be an inadequate mechanism to study an EET scheme if we consider the challenges posed to this turn by behavioural economists. George Loewenstein has argued that although there are similarities in the approaches of experimental and behavioural economics, the former does not allow for the incorporation of findings from diverse psychological studies and methods.³⁵ While there are shortcomings with regard the internal validity of economic experiments (such as the absence of random assignment),

³³ Smith V., "Monetary rewards and decision cost in experimental economics" in Smith V., ed. (2000), *Bargaining and Market Behavior*, pp. 241-260. Cambridge: Cambridge University Press.

³⁴ For a review, see R. Andrew Muller and Stuart Mestelman, 'What have we Learned from Emissions Trading Experiments?' (1998) 19 *Managerial and Decision Economics* 225.

³⁵ George Loewenstein, 'Experimental Economics from the Vantage Point of Behavioural Economics' (1999) 109 *The Economic Journal* 25.

the major criticisms have been levelled against their external validity. For example, control over incentives is maintained usually by monetary payments contingent on behavior. This excludes the possibility of considering incentives other than profit-maximisation, such as projection of a positive self-image or satisfying notions of justice.³⁶

I do not think, however, that Lowenstein's critique of the narrowness of experimental economics explains the distinction between the two approaches to experimentation; something that was also left unaddressed in the Nobel Prize Committee's summary of using experiments in economics.³⁷ I suggest that the primary distinction lies in the fact that while experimental economics tries to *identify contextual variables that influence behaviour* (or external factors), BLE attempts to identify behavioural characteristics (or internalised factors) *despite* the context. To some extent, therefore, experimental economics endorses a constructivist approach regarding the context that shapes behaviour, but has a dispositionist view of the individual.³⁸ On the other hand, behavioural economics has a more dispositionist view of the context, but a more nuanced view of individual behaviour. Thus, even if behavioural economics is concerned with context (such as the effects of reference groups), such context is assumed to be internalised and adjusted to suit internal predispositions. A corollary to this approach is the one adopted by experimental economics, where internal dispositions are assumed to adjust to contexts, whereby contextual variables can be identified to have explanatory value. I suggest that this difference in approach has to do with the epistemic orientations and technologies of doing research. Both of them share a similar ontological orientation: both Smith and Kahneman believe that deliberative decision-making is not an adequate

³⁶ The primary professed advantage of the methods adopted by experimental economists is the replication of context to assist with the engineering of institutions to enable efficient outcomes. However, suppression of context through theorising (or pre-textual reductionism) is a characteristic of economic experiments as well. See Gary Bolton, Testing Models and Internalizing Context: A comment on "Theory and Experiments: What are the questions?" (2010) 73 *Journal of Economic Behavior and Organization* 16.

³⁷ See Information Department, the Royal Swedish Academy of Sciences, *Foundations of Behavioral and Experimental Economics: Daniel Kahneman and Vernon Smith*, Advanced information on the Prize in Economic Sciences 2002, 17 December 2002.

³⁸ See Hanson, *supra*.

marker of actual behaviour.³⁹ Further, both of them share the scientific inclination to identify the effects of a specific variable to ensure the internal validity of their research.

Integral to the experimental approach are normative assumptions about efficiency, prescriptive conditions within which rational actors operate, identification of as many institutional factors as possible to enable laboratory replication. Given that behaviour pursuant to an introduction of a discrete policy mechanism such as an EET may not be premised solely on utility maximization, and be affected by social factors as diverse as the influence of reference groups, it is clear that an EET could benefit from experimental approaches. Keeping in mind the introduction on the complexities of incentives and motivation in Chapter 1 and the need for ensuring the effectiveness of an EET scheme, we concentrate on a variable not considered by those who have conducted emissions trading experiments: the *nature of the incentive* for reducing emissions.

4

A. The Role of Incentives and Loss Aversion

Examining the effect of incentives on climate change related behavior is not a straightforward inquiry. Whether incentives are required at all is a moot point. MacMakin, Malone and Lundgren, for example, demonstrate by way of a field experiment that residents are more motivated to conserve energy without financial incentives.⁴⁰ However, the constraint of a field experiment is that particular characteristics of an incentive mechanism are difficult to ascertain. Drawing primarily on laboratory experiments, Bolderdijk has problematized the relationship between monetary incentives and behavioural change, finding that the source of the incentive, the way rewards are communicated and the perception of privacy-infringement by financial gains profoundly affect the effect of such incentives.⁴¹ This demonstrates the necessity for clarity on how effective a particular incentive-based scheme would be for responding

³⁹ See their respective Noble Prize lectures.

⁴⁰ Andrea H. McMakin, Elizabeth L. Malone and Regina E. Lundgren (November 2002), 'Motivating Residents to Conserve Energy without Financial Incentives' (2002) 34:6 *Environment and Behavior* 848.

⁴¹ Jan Willem Bolderdijk, *Buying People: The persuasive power of money*, PhD Dissertation, 2011.

to climate change, and how such incentives can be effectively designed for policy purposes. The importance of the nature of incentives had been indicated in studies on energy conservation, but studies have been limited to the size of the incentive.⁴² Recent work on incentives has been moving towards interrogating the nature. This commenced primarily with the idea of a motivational crowding-out⁴³ with a concentration on exploring what forms of rewards would seek to crowd-out intrinsic motivation.⁴⁴

This problematisation adheres to the spirit of behavioural economics: it applies the way motivation is researched in social psychology to the study of incentives. If we look at the recent history of behavioural economics, we find that psychological research was looked to initially by economists because replicable experiments on economic decision-making (primarily the Ultimatum Game) revealed that 'other-regarding motives' are a better predictor of behaviour than monetary incentives.⁴⁵ Thus, the complex nature of intrinsic motivation has been a preoccupation with economists trying to find out reasons why extrinsic incentives did not function as predicted. This interaction is essentially the cornerstone of the endowment effect and loss aversion.

Loss aversion is arguably the cornerstone of Kahneman's work in behavioural economics. Within legal scholarship, there has been considerable interest in loss aversion and the endowment effect, with its use as an explanatory framework for various areas of private and public law.⁴⁶ There have also been regulatory efforts to utilise the experimental findings of loss aversion in policy

⁴² Paul Stern et. al., 'The Effectiveness of Incentives for Residential Energy Conservation' (1986) 10 *Evaluation Review* 147.

⁴³ Uri Gneezy, Stephan Meier and Pedro Rey-Biel, 'When and why incentives (don't) work to modify behavior' (2011) 25 *Journal of Economic Perspectives* 191.

⁴⁴ Stephanie Stern, 'Reconsidering Crowding Out of Intrinsic Motivation from Conservation Incentives' in N. Chalifour (ed.) *Critical Issues of Environmental Taxation: International and Comparative Perspectives* (Oxford: OUP: 2008).

⁴⁵ John M. Gowdy, 'Behavioural Economics and Climate Change Policy' (2008) 68:3 *Journal of Economic Behavior and Organisation* 632.

⁴⁶ For a recent review, see Eyal Zamir, 'Loss Aversion and the Law' (2012) 65 *Vanderbilt Law Review* 829.

design,⁴⁷ but none to our knowledge regarding climate change behaviour. Even within sectors that are covered within the EU ETS, the implementation of new technologies by energy companies such as smart-grids require individual behavioural responsiveness. The primary difficulty identified in relation to putting a transition to smart grids into effect is switching costs, of which individual resistance to change is of paramount importance.

B. Motivation behind the Particular Study Conducted

As discussed in Chapter 3, the effectiveness of an EET depends on public participation, which requires an assessment of public responsiveness of such a scheme. However, this component is problematic as recognized by the PCT Report. In this chapter, we first argue that the studies relied upon to gauge public responsiveness are amenable to improvement, and may be complemented by experimental modifications. We then proceed to experimentally test one primary component of the EET scheme- the nature of the incentive offered to facilitate public engagement with climate change, as the EET scheme can be distinguished against non-incentive based climate policy alternatives, as well as other incentive-based proposals (such as subsidies) based on this criterion. It may be argued that it would be difficult to assess the acceptability of a scheme without inputs regarding a workable design of the same. And integral to the PCT and EET schemes is incorporation of a convincing incentive into its design. Most of the literature regarding the PCT scheme suggests allocating an equal number of allowances to all individuals. While concerns such as equity and distributional fairness have been explored in Chapters 5 and 7, the concern of this chapter is to assess the nature of individual engagement with an incentive scheme.

Specifically, the short policy question that informed the experiment was *whether the nature of allowance allocation to individuals makes a difference in the mediating role of incentives in climate change behaviour. A corollary question was whether such mediation was moderated by environmental (or biospheric) values.* Within the epistemic framework of behavioural economics, the question was

⁴⁷ See for instance, Alberto Alemanno and Amandine Garde, *Regulating Lifestyle – Europe, Alcohol, Tobacco and Unhealthy Diets* (Cambridge: Cambridge University Press, 2015).

whether loss aversion plays a role in the use of incentives. The motivation behind the experiment can be described in both policy terms, and behavioural terms, as explained below.

As far as policy interest is concerned, the primary issue is formulating an appropriate design for an end-user emissions trading scheme. One aspect of such design is the *manner* in which allowances are allocated. Within the EU ETS, we have noted a shift in the manner of allocation from a free allocation (or a grandfathering system) to an auctioning system. This shift has been justified on institutional grounds, as well as correcting unforeseen deficiencies of a grandfathering system. As far as individuals are concerned, there is sufficient literature to suggest that the nature of an incentive has effects on the behaviour of the target group.⁴⁸ Thus, the motivation behind this experiment may be explained as follows: (i) the design of an EET scheme is important from a policy-maker's perspective, (ii) one of the crucial aspects of such design is the nature of allocation of permits/allowances, and that (iii) the nature of allocation could have an impact on the effectiveness of the incentive, or the public responsiveness of the scheme.

From the perspective of behavioural studies, studies on loss aversion and the operation of incentives have been conducted independent of each other. This is primarily because as far as experimental methodology is concerned, loss aversion has conventionally belonged to psychological experiments (albeit with explanatory value for economic issues), and incentives have been studied in economic experiments, such as through trading games. This is brought out very clearly in Houde and Todd's review of the use of behavioural economics in energy policy, where loss aversion and incentives are identified as two separate categories, with no interaction between them.⁴⁹ Our intervention in this regard was to make an attempt at de-clustering the concerns that animate

⁴⁸ Gneezy, Meier and Rey-Biel, 'When and why incentives (don't) work to modify behavior', *supra*.

⁴⁹ Sebastian Houde and Annika Todd, 'List of Behavioral Economics Principles that can Inform Energy Policy' *Precourt Energy Efficiency Center, Stanford Working Paper* 2011; available at: <http://ewp.industry.gov.au/sites/prod.ewp/files/submissions/Energy%20White%20Paper/EWPGP128-802.pdf>.

such categorisation without compromising the internal validity of a simple laboratory experiment.

III. THE EXPERIMENT: DESCRIPTION, ANALYSIS AND INFERENCES

A. Introducing the Experiment

Keeping the above motivations in mind, we collaborated with the Faculties of Economics & Business and the Faculty of Psychology to secure the support of their expertise and facilities. In brief, the experiment was about assessing whether green food choices (which we used as a proxy for environmental responsive behavior) are influenced by ‘earned’ carbon allowances as against ‘free’ carbon allowances. For this purpose, half of the participants received their ‘tokens’, representing carbon allowances, as compensation for grading papers and therefore earned them. The other half of the participants (the control group) received allowances for free; they received allowances without being told about the link between grading papers and making food choices. Next, participants indicated what food items they would like to have for lunch by ticking off specific items on a menu. ‘Greener’ items require a smaller number of allowances. The participants are told that they will receive the money equivalent of the allowances they do not use for lunch. It was hypothesized that earned allowances would result in participants making greener (less carbon intensive) food choices as they would not like to let go of their allowances so easily. Importantly, the participants were also required to complete an exercise in relation to their Value Orientation,⁵⁰ which were contrasted against their choices. The value orientation formed a significant part of the experiment as it was linked to the idea that choices the participants made were influenced by their predisposed values; and there would be a correlation between these values and the nature of the incentive.

⁵⁰ This has been devised largely by Linda Steg and her team at the Faculty of Psychology, University of Groningen. See J.I. De Groot and L. Steg ‘Value Orientations to Explain Beliefs Related to Environmental Significant Behavior: How to Measure Egoistic, Altruistic, and Biospheric Value Orientations’ (2008) 40 *Environment and Behavior* 330.

B. Conducting the Experiment

From the discussion in the above sections, I would like to highlight the axiological⁵¹ concern that people may not know themselves, and this concern would prompt interest in methodologies other than surveys or interviews in appreciating whether an EET or a PCT would be useful. Specifically, we have discussed how experimental research shows us that the effect of an incentive on behaviour is not straightforward. We have seen that the effect of an external incentive is contingent on the way it is structured and how it is internalised. Factors such as size of incentive, the way it is communicated, the reference group for the allegiance to an incentive have been shown to be relevant factors in relation to structuring an incentive. In relation to internalisation, we have seen that the primary import of the Kahneman-inspired scholarship of behavioural economics, cognitive and social psychology is to show that the internal hard-wiring of an individual is underestimated in relation to assessing the effect of external forces such as incentives. From a normative perspective, therefore, there is an interest in structuring an incentive in a manner that would reveal and address the ‘predictable irrationality’⁵² of internalisation. Thus, what needs to be studied in the context of a PCT or EET is to assess how internalisation works, and the features that should be considered in incentive-design to respond to the processes of internalisation.

Intuitively, capturing all possible structures and internal features of individuals in a single study would be impossible. Thus, I had to choose for the purpose of my study some particular structure of feature. Given the phenomenon of loss aversion has the potential to predict a close relationship between external incentives and internal motivation, and the fact that it is the central phenomenon in Kahneman’s entire canon, this is what I chose to focus on. Ultimately, the study zeroed in on the very particular question on whether the phenomenon of loss aversion may have something to say about the way allowances may be allocated to individuals. This was, however, not

⁵¹ Please refer to the discussion on methodology and axiology in Chapter 1.

⁵² This phrase is borrowed from Dan Ariely’s popular book on behavioural economics. Ariely, *Predictably Irrational* (New York: Harper Collins, 2008).

my initial desire. I wanted to see the difference between a ‘simulated’ EET and a simulated tax, and their effect on behaviour. Methodologically – as I was to discover in the course of my stint in a lab– exploring anything more than one phenomenon in one study is inadvisable. With this, we turn to the study.

C. Analysing the Experiment⁵³

The experiment was divided into six steps, which are summarised below:

Step 1: performance of mundane task, **Step 2:** division of participants into the group which was made to link the mundane task to the lunch reward (or ‘loss aversion’ group) and those who were made to believe that the lunch was independent of the task and hence would not view it as a reward (control group), **Step 3:** the allocation of assigned allowances by the participants to a climate-friendly or a climate-unfriendly lunch, **Step 4:** completing the value test, **Step 5:** providing their personal details, and **Step 6:** debriefing when they returned for lunch, during which time the believability of the manipulation was inquired about, as well as the difficulty of the mundane task.⁵⁴

In this section, we first explain how the different variables correspond to the above steps while compiling the raw data set, and then demonstrate the different steps in analysing the data compiled.

i. Compilation of Raw Data

In the table below, we show how each of the five steps described above are reduced to different variables, and the nature of the variable used. SPSS was the preferred software used for the purpose of entering the data and examining the correlations between the different variables.

⁵³ I am indebted to Oscar Couwenberg for helping me with processing the data and Daniela Crisan, a PhD Candidate and Lecturer in Statistics at the Faculty of Behavioural and Social Sciences, University of Groningen for reviewing this section.

⁵⁴ The documentation related to the experiment is on file with the author

Step of the Experiment	Variable	Nature of Variable
Mundane Task	Number of Words	Numeric (calculated manually)
Loss Aversion Group or Control Group	Task plus Tokens (TpT) or Task separated from Tokens (TsT)	Binary / Dummy Variable
Allocation of allowances	Number of Allowances Allocated for Lunch, or Total Carbon Value (TCV)	Minimum = 0 and Maximum = 34
Values	Score obtained on each of the 16 Values	Respondents rated the importance of the values on a nine-point scale
	Total Score on Values	Aggregate of score for 16 Values on single scale
Personal Details	Sex	Dummy variable
	Age	Numeric
	Course of Study	Dummy variable (Bachelor or Master degree)
Debriefing	Believability of Manipulation	Respondents rated the believability on a 5 point Likert scale
	Difficulty of Mundane Task	Respondents rated the difficulty on a 5 point Likert scale

The total number of participants was 134. However, among these participants, some were excluded during the process of capturing the data owing to non-satisfaction of one or more of the steps mentioned above. We chose not to exclude participants who did not show up for lunch because the variables considered during the debriefing are not integral to the experiment.⁵⁵

ii. Analysis of the Data: Relationships Sought in the Data

After the raw data was compiled, we sought to:

(1) Assess the effect of how the allowances were obtained (i.e. either for free or the 'No Lunch' group or the 'earned' Lunch group) on the number of allowances used (or TCV). This is the first relationship that we sought to study in this experiment; i.e. whether participants would be more reluctant to give up their earned allowances, and would therefore chose more climate-friendly items on the menu. However, it would be insufficient to restrict our analysis to this correlation, as other variables may influence the relationship between these two variables.

(2) As the effect of the allowances on decisions regarding food choices could be influenced by other factors, our next step was to examine such possible relationships. In this regard, examining the influence of values could be instructive for three reasons: (i) there could be a noticeable but independent trend regarding certain 'internal' values of the participants, and the external incentive mechanism of the earned (or free) allowances; (ii) the values could also influence or mediate the amount of allowances spent on lunch; and (iii) the relationship between the incentive and the allowances spent could be moderated by the strength of the different values. Existing literature has concentrated on biospheric values,⁵⁶ but we sought to study the relationship between the incentive and other value categories as well. To examine these relationships, we combined and aggregated individual items in the value test into categories commonly used in the literature, i.e. Altruistic Values (AV),

⁵⁵ The initial coded data is on file with the author.

⁵⁶ Jan Willem Bolderdijk, Madelijne Gorsira, Kees Keizer and Linda Steg, 'Values Determine the (In)Effectiveness of Informational Interventions in Promoting Pro-Environmental Behaviour', *Plos One*, December 2013, Volume 8, Issue 12.

Egoistic Values (EV) and Biospheric (or green) Values (BV).⁵⁷ In a second step, we constructed three variables that represented percentages of the total values of the AV, EV and BV that were Altruistic Value Fraction (AVF), Egoistic Value Fraction (EVF) and Biospheric Value Fraction (GVF) respectively.

(3) Similar to the possible influence of internal values, other personal traits could also affect the relationship between an incentive mechanism and climate choices. We therefore sought to analyse the correlation between the personal details and the other variables. As we noticed a significant correlation between Sex and other variables in the first analysis, we decided to probe this influence of Sex further.

Annexure 1.1. shows the standard descriptive statistics for the variables discussed above.

However, ongoing discussions with among others Jan Willem Bolderdijk, made clear that this approach could not be completely rationalized; testing the hypothesized relationships was in the end done via (i) a T-test, (ii) assess the biospheric values via a Hayes' test to test its strength as a moderator, (iii) perform an Analysis of Co-variance (ANCOVA) to see the predictive effects of the variable 'Sex'. I will describe these steps in the next section, and discuss the implications for our study.

iii. Analysis of the Data: Modified Approach

The T-Test

Given that there were two primary groups into which the participants of the experiment were categorised, i.e. the Loss Aversion Group and the Control Group, it stood to reason that the first and primary point of inquiry is to see whether the mean of the dependent variable (i.e. number of allowances used on the lunch) differed significantly for these two groups. Further, as the members of the two groups were almost equal, a simple T-test would suffice.

⁵⁷ Ellen van der Werff, Linda Steg, and Kees Keizer, 'The Value of Environmental Self-identity: The relationship between biospheric values, environmental self-identity and environmental preferences, intentions and behaviour' (2013) 34 *Journal of Environmental Psychology* 55.

We conducted this test and found no significant difference between the two groups ($t = 0,40$)⁵⁸.

a) Effect of Biospheric Values

I looked at different correlations between egoistic, altruistic and biospheric values and with other variables to assess whether they had any predictive power. Assessing biospheric value strength for the experiment could be justified because an incentive mechanism might cause dissonance among people who already were already motivated in a particular fashion towards climate issues.⁵⁹ Thus the primary point of inquiry was whether the strength of such values form a moderating role. While other values might (hedonistic, altruistic etc) exhibit a correlation with the dependent variable, there was no inference that could be drawn from such a correlation for studying the impact of loss aversion on carbon choices.⁶⁰ In other words, unlike following the dissonance trail for biospheric values, there would be no basis for inquiring after these other values for the purpose of this experiment.

Once it was clear that the testing of the moderating role of biospheric values had a purpose, the next question was how to conduct such an assessment. For this purpose, we used the analysis of variance (ANCOVA) procedure in SPSS. The idea was to see whether loss aversion was associated with the TCV of lunch and whether this relation was further moderated by the biospheric values of the participants. The outcome did not show a significant effect of the biospheric values on the TCV variable. The annexure below gives an overview of the results and shows that all variables are not significant. From this we may conclude that biospheric values, at least in this experiment, appear to have not created a dissonance nor in the reaction of participants to the incentive mechanism.

⁵⁸ A one sided, two sample equal variance T-test was used, hypothesizing that the loss aversion group would use less tokens on the lunch than the control group.

⁵⁹ The assumption is that the values reflected climate change concerns, i.e. there is equivalence between climate change and biospheric concerns represented on the value questionnaire.

⁶⁰ This exclusion could be because of working towards a clear strong inference that would characterise an experiment of this sort. See discussion in Chapter 3, Section II.

b) Analysis for Gender

Taking a step back, the variable ‘Sex’ was not an independent variable that was sought to be measured; i.e. in the study we did not seek to examine the relationship between gender and climate incentives. However, when we did explore our data, it appeared that the gender of the participants seemed to play a role, namely there is a significant correlation between gender and two of the biospheric value indices . It also appeared that there was a negative correlation between gender and the allowances used for food in both control groups. There could be multiple explanations for this correlation. It could be hypothesised, for instance, that the calorific value of low carbon foods were also low, and the female participants tend to eat healthy. Simply put, there was a high possibility that gender might have a bearing on the nature of the incentive, but we did not have (or seek to have) an a priori explanation for it. The solution, therefore, would be to see if the results would alter if gender would be controlled for in the analysis. Again for this purpose, the ANCOVA procedure in SPSS was used. The idea was to find whether the two groups behave differently regarding the effect of the incentive on carbon consumed (TCV), and the influence of Sex at the same time.⁶¹ To check the robustness of this result a multiple linear regression model was run with the same variables, to find that only the variable gender was significant in the model. The output is found in **Annexure 1.2**.

iv. Conclusions from the Experiment

To recap, it was suggested that the nature of an incentive mechanism may have a bearing on individual engagement with the climate instrument containing such mechanism. All aspects of an incentive mechanism cannot be captured in a single experimental study; on the contrary, the endeavour of a lab experiment is to single out a specific element of the mechanism. In this study, the concentration was on the method of allocation, and specifically whether it would make a difference whether allowances were allocated freely. Drawing on Kahneman’s work, we hypothesised that if the allowances are allocated freely to individuals, carbon-savings may be less worth compared

⁶¹ Andy Field, *Discovering Statistics using IBM SPSS Statistics* (London: 4th edition, Sage, 2013), pp. 478-506.

to a method of allocation where allowances are ‘earned’. It is this property of loss aversion that we sought to test by designating two groups of respondents in a lab-setting.

It could be argued that since the T-test revealed that there was no difference in the mean allowances used between the two groups, then the policy implication is that loss aversion does not play a role here. The conclusion that it therefore does not matter how allowances are allocated in an EET is, however, too much. The rigorous satisfaction of the internal validity of lab experiments would disallow such an easy transit to an external norm. Specifically, there is a *presumption* against a regression towards the mean that derives from a preference for the null hypothesis, i.e. causality between dependent and independent variables is assumed to not exist, unless it can be demonstrated otherwise. It is for this purpose that we test for the moderating force of biospheric values and see if it is possible to neutralise variables that may influence the relationship between the dependent and independent variables. By taking these steps, we inch closer to the conclusion that perhaps there is no loss aversion in this case, and therefore the method of allocation may not make a difference.

D. Drawing Inferences

The term ‘inference’ in psychological research is usually understood as statistical inference.⁶² Once the data has been accumulated, then it is up to statistical tools to point to correlations between the different variables. Accordingly, inferences flow from the significance of such correlations, and primarily with regard to the significance of the correlation in the hypothesized relation between dependent and independent variable(s). Mediators and moderators are checked to assess inferences with correlations. This is the idea of inference that flows from the methods used in the experiment in question. However, the term ‘inference’ is inevitably used in a different sense once we situate the experiment within a different discipline such as economics, or view it as expert testimony for a policy question. In behavioural economics, the

⁶² See for instance the discussion on inference in a standard prescribed psychology textbook. Brett Pelham and Hart Blanton, *Conducting Research in Psychology: Measuring the weight of smoke* (Wadsworth, 4th ed., 2013), pp. 316 – 325.

term inference is viewed in terms of incorporation of psychological findings in economic models. These two ways of looking at inference are different from the way validity is understood for regulatory issues. The way a legal scholar or a regulator would view inference is in terms of external validity, or how an experiment may illuminate a policy question. In Chapter 3, the issue of comparing the external validity of a lab experiment with findings on similar issues from other disciplines was raised, and how they may or may not be compatible while making regulatory choices. In this section, we look at how the experiment described above may be used to understand incentives for climate behaviour. To do so, I seek to explain how inferences may be made – what inferences can be expected to be made from this and similar experiments for policy purposes. Concomitantly, there are some inferences that may not be expected to be made from similar experiments. More precisely, inferences from psychological experiments such as this one would be unsuitable for certain analytical categories. I will start with this issue and work up to the possibility of deciding on the relevance of empirical findings for policy questions.

i. What Cannot Be Inferred

In Chapter 1, I suggested that BLE scholarship may proceed with the interrogation and development of analytical categories. The scholar who has most comprehensively articulated this way of doing BLE is Claire Hill.⁶³ In her view, BLE analyses ought to address the questions of ‘how people make sense of the world’ or ‘how people categorise’.⁶⁴ This is an important query in its own right (in fact, as would be evident, categorisation and recategorisation is the way I internalise BLE scholarship in my writing); however I suggest that inferences regarding these questions cannot be drawn from the experiment that was conducted, and I suspect nor can similar lab experiments that operate within the axiological preference for *how people behave*. While BLE is concerned with questioning and arriving at alternatives to the rational actor axiom, its axiology is still centred around the fact of behaviour, or choices. Thus the several other dimensions of ‘how individuals live in the world’ or ‘what their identities are’ become relevant for their instrumental nature, i.e. they are important only for

⁶³ Hill, ‘Beyond Mistakes’, *supra*.

⁶⁴ *Ibid*, p. 567.

the purpose of what bearing they have on behaviour. Thus, in the experiment conducted, the ecological values were assessed only to see if they influenced the incentive mechanism that was devised. To clarify, it is one thing to say ‘what people value’ is an end in itself. It is quite another thing to say that ‘how people categorise’ is important for ‘how they make choices’. The latter is the axiological concern of BLE.⁶⁵ In fact, a static view on viewing the world or valuing something over another is an ‘as-if’ view for the purpose of BLE.⁶⁶ For analytical categories that are designed to interrogate what people value and how people see the world, this experiment would have precious little to contribute. Undoubtedly, we could single out one component of the experimental design (the values bit, for instance) and draw inferences from it. This, however, would require multiple other considerations, such as what effect the other components of the experiment may have had on this component. If we were to view the steps of the experiment as a whole, as components of one process, then it would be difficult to make such inferences. It is for similar reasons that we cannot conclude that women are more climate neutral than men though gender appears to play a role in veering towards greener choices. All the inferences that may be drawn from the experiment as a whole are with regard to *the relationship between the incentive mechanism and behaviour, and the factors that may influence such behaviour*. Given this limitation, I wish to clarify that there are three inferences germane to an EET that cannot be made from this experiment or piecemeal studies using a similar methodology: *whether the incentive operates as an internalised motivation, how people can organise themselves collectively in a market, and how people can make themselves rational*. These are now discussed in turn.

a) Whether Incentives can become Motivation or Moderate Social Norms

The most obvious difficulty of a laboratory experiment is that the dependent variable(s) under examination cannot be tested over time. Take for instance the famous field experiment on motivation crowding-out where a small fine was levied on parents for picking up children late.⁶⁷ The primary result – that

⁶⁵ To come back to the sociological critique of the individualist bias of psychological experiments discussed in Chapter 3, the critique that an individualist view of behaviour is not reflective of the social context gathers steam only when the social context has an effect on behaviour.

⁶⁶ See the discussion in Chapter 1 on Methodology and Axiology.

⁶⁷ Uri Gneezy and Aldo Rustichini, ‘A Fine is a Price’ (2000) 29 *Journal of Legal Studies* 1.

parents were willing to pay a small fine to pick up their children late – showed how an incentive can crowd-out an inclination. The finding that is seldom discussed is that once the fine was lifted, the disincentive stuck – parents kept picking up their children at the later time even if they didn't have to pay a fine.⁶⁸ Thus, this appears to be a situation where the disincentive is internalised and effectively worked against other forces that may have prompted parents to pick up their children on time, such as social sanctions of shame or guilt. One reason that may be offered is that the parents were disposed to picking up their children late anyway, and the incentive served to strengthen this disposition. It seems that the pressure to pick up children exactly on time is not an internalised social norm, and the incentive could not create new preferences. The incentive did appear to create a change in behaviour, and not desirably so. Further, it seems that the incentive did not create a change in real preferences, or motivations. What is clear, however, is that only a longitudinal study permitted observing the relationship between incentives and behaviour.

Let us return to Mr. Beavan and the camera. We do not know whether the Beavan family returned to a high-carbon lifestyle after filming a 'no-impact' life for a year, whether this lifestyle was the same as earlier, whether it was less carbon-intensive or more carbon-intensive. This factor would be especially important for a new market mechanism, as the property of learning-by-doing would heavily contribute to an understanding of dynamic efficiency. Even if the costs of participation may be initially high, they do not need to be sunk costs if habit reduces the costs of engagement over time. The longitudinal effect of an incentive, and how it corresponds with social norms is not something that can be captured by a temporary study such as a laboratory experiment.

The issue of temporality prevents observing the presence of a 'carbon social norm' and whether social norms can be altered. L&E scholars such as Robert Ellickson and Eric Posner have argued that it is more social norms than formal law that shape behaviour; the interest in social norms has been branded as the concern of 'the new Chicago school'.⁶⁹ Ellickson famously argued that collective action without the organising force of law leads to 'order' because people act

⁶⁸ 'The number of late arrivals seemed to remain stable after the fine was removed.' *Ibid.*, p. 8.

⁶⁹ Lawrence Lessig, 'The New Chicago School' (1998) 27 *Journal of Legal Studies* 661.

out of self-interest.⁷⁰ Posner partially criticises the Ellicksonian order as there is no assurance that spontaneous social order would lead to social welfare better than legal intervention;⁷¹ social reform through law may be required to alter the functioning of social norms. However, he follows Ellickson's basic line of thought: the possibility of repeat interactions (or repeat games) creates incentives for individuals to engage in co-operative behaviour and creates 'behavioral regularities'. Per Posner, such regularities are characterised primarily by 'reputational signalling' in order to ensure collective payoffs.⁷² Dan Kahan has critiqued the rationality assumption in accounts such as Posner's, arguing that people are emotionally moved by the voluntary contribution of others to the public good and thus build-up a relationship of trust, and it is trust that informs collective action.⁷³ Anthropologists such as John Conley have critiqued the rational-actor model of social norms, and Ellickson's assumption of a law-free *tabula rasa* where social order happens in the absence of the shadow of law.⁷⁴ Irrespective of whether we agree with the Ellickson-Posner rational actor model of social norms, Kahan's trust-based behavioural framework or a situated account of social norms, there is one aspect that is common to all: social norms stick. Unlike the Ellicksonian account, the point of regulation such as the introduction of an incentive would be to create a desirable state of affairs taking into account the potency of social norms. Rather than assuming the existence of 'order without law', there is merit in exploring the relationship between legal reform and social norm.

⁷⁰ Ellickson, *Order Without Law*, *supra*.

⁷¹ 'Legal intervention may have made things worse, but we cannot really tell'. Eric Posner, *Law and Social Norms* (Cambridge, Massachusetts: Harvard University Press, 2000), p. 176.

⁷² *Ibid*.

⁷³ Dan Kahan, 'Signaling or Reciprocating? A reponse to Eric Posner's Law and Social Norms' (2002) 36 *University of Richmond Law Review* 367. Similarly, Rachlinski is of the opinion that social psychology offers a far richer insight into social norms than the 'impoverished' account that economics and game theory have to offer. Jeffrey Rachlinski, 'The Limits of Social Norms' (2000) 74 *Chicago-Kent Law Review* 1537.

⁷⁴ John M. Conley, 'The Sacred Cows of Shasta County: An anthropologist's view of Ellickson's Order without Law' (1994) 7 *Social Justice Research* 419. For a similar view on Ellickson's reductionist view of the contextual factors that shape peoples' behaviour, see Douglas Litowitz, 'A Critical Take on Shasta County and the 'New Chicago School'' (2003) 15 *Yale Journal of Law and the Humanities* 295.

A laboratory experiment like the one conducted (even if replicable) would not be indicative of *the mediation of behaviour by social norms, what social norm would be an effective one for the reduction of emissions, or how an incentive mechanism can moderate social norms in producing desirable emissions mitigation behaviour*. This does not mean that psychological experiments are incompatible with the study of social norms. On the contrary, experiments conducted by social psychologists point to the speedy development of social norms when individuals are members of groups⁷⁵ and the prevalence of social norms in everyday behaviour (such as individuals respond differently depending on who they compare themselves with⁷⁶). Such prevalence could be a stand-in for a component of a formal incentive mechanism, such as a penalty. This would require the possibility of an incentive mechanism or a regulatory intervention to create or manipulate a social norm to have an effect on people's behaviour, what has been termed as 'the expressive function of law'.⁷⁷ The potential of a regulatory intervention to moderate the mediating force of social norms is amenable to investigation, though such investigation requires identification of the mediators of social norms, something that cannot be studied in an experiment that follows a method such as the one described in this chapter.

An example of how the relationship between a regulatory intervention, a social norm and the expressive function of the regulation may be studied is Susan Yeh's work on whether obesity laws in different states in the US lead

⁷⁵ The first systematic articulation of social norms may be attributed by a series of experiments conducted by the Muzafir Shefir in 1936 on how individuals respond to stimuli on their own and in groups; Shefir found that a group creates a social norm that shapes the behaviour of individual members even in the absence of the group. Also worth noting is Kurt Lewin's famous experiment on incentivising the eating of organ meats by households during World War II to reduce the demand for meat by getting households to make a public commitment. For a discussion, see Rachlinski, 'The Limits of Social Norms', pp. 1547 – 1549.

⁷⁶ Daniel T. Gilbert, R. Brian Gysler and Kathryn A. Morris, 'When Comparisons Arise' (1995) 69 *Journal of Personality and Social Psychology* 227.

⁷⁷ "...my simplest suggestion here is that we begin to make sense of law's expressive function if we attend to the role of law in the management of social norms. No system of law can entirely avoid that role; even markets themselves-which are very much a creation of law-are exercises in norm management." Cass Sunstein, 'On the Expressive Function of Law' (1996) 144 *University of Pennsylvania Law Review* 2021, pp. 2052 – 2053.

to a reduction in obesity, given the mediating effect of social stigma.⁷⁸ Yeh categorises nutrition education requirements⁷⁹ as anti-obesity regulation (the intervention), longitudinal data on self-reported feelings of acceptance as a proxy for social stigma (the social norm) and income as proxy for the educational outcomes of obese and non-obese students (the effectiveness for gauging expressive function).⁸⁰ Given that states in the US have varying anti-obesity laws, such variance allows Yeh to assume away endogeneity (or that the social norm could influence regulation)⁸¹ and conduct cross-sectional regressions to estimate differences in the effectiveness of such regulation. She finds that the states with the stricter anti-obesity regulation have worse obesity stigma. Unlike my study that concentrates on an aspect of the nature of the incentive mechanism that may inform regulatory intervention, Yeh's study has the benefit of retrospectively studying the effects of an existing (and assumed to be exogenous) regulatory intervention. While I did check for the effect of environmental values on the decisions made by the participants, I would be hesitant in categorising such values as internalised social norms. Though a BLE scholar might have issues with Yeh's reliance on a longitudinal accumulation of stated preferences about stigma, which in turn is assumed to be a proxy for a social norm of adolescent engagement, the idea of stigma fits with the social norm literature on signalling group behaviour. Thus, what I wish to highlight is that studies similar to the one reported in this chapter could contribute to a study such as Yeh's, and both are important in discerning the expressive function of regulation, but they cannot be conducted simultaneously or using the same methods.

⁷⁸ Susan Yeh, 'Laws and Social Norms: Unintended consequences of obesity laws' (2013) 81 *University of Cincinnati Law Review* 173.

⁷⁹ These education requirements are in addition to labelling requirements, taxes on unhealthy products, or treasury-sponsored information campaigns. Yeh refers to regulation such as the enforceable requirement by 'high schools to offer instruction on dietary behaviors and nutrition as part of their health education curricula.' *Ibid*, p. 187.

⁸⁰ *Ibid*, p. 194.

⁸¹ Unlike Ellickson who ignores endogeneity in his idea of 'law' or something that is exogenously imposed, Yeh is explicit about this assumption.

b) How People Can Make Themselves Traders

A crucial incentive mechanism of the EU ETS is the flexibility to buy and sell allowances. While it is not mandatory to trade, a robust market would lead to a stable price, as well as incentivise participants to consider whether it makes economic sense to reduce emissions or buy more allowances. As is evident from robust primary and secondary spot and futures markets for allowances that have quickly and actively developed, the trading component engenders participation in sophisticated markets, with the mechanisms and tools of finance playing a mediating role. There are sufficient arbitrage options that may be capitalised on, and the technologies of valuation need to be understood and applied carefully in order for participants to benefit from the process of trading. This has, in fact, led to questions regarding how allowances and credits should be characterised as financial transactions.

The same applies to an EET (as well as variations mooted so far such as a PCT); as we will see in Chapter 5, several of the respondents to a survey see the trading component as crucial. A crucial question, therefore, is whether this experiment, or BLE scholarship, can shed light on how individuals can become good traders.

One of the intuitions behind the experiment was that if allowances are 'earned', then owners will be hard pressed to let them go; they will therefore – a hypothesis – be used wisely. Perhaps the method of allocation could influence information-forcing, and individuals would have to engage in thinking through their carbon choices, and whether they would economise their carbon choices. As discussed earlier, we did not arrive at results that would support their intuition. In our experiment, however, there was no relationship between the actual prices of products that the allowances would have to be spent on, and the carbon prices. To do so would render the experiment far too noisy to arrive at results regarding the manipulation of loss aversion I sought to study. As discussed earlier, a key insight on psychological experiments on incentives is that it is the nature rather than the quantity of the incentive that is of primary concern. This is likely to be true for a stand-alone EET market. We cannot anticipate an EET market to be robust enough for individuals to have their eye on arbitrage. Should the EET be a part of (or be linked to) the EU ETS market, then individuals

would compete with firms in the various carbon markets. In this regard, one may imagine that the field of ‘behavioural finance’ may make individuals into good traders, strategists, arbitrageurs. However, this is not the case. The field of behavioural finance – commencing with Richard Thaler’s substantial contributions – is developed around the idea that behavioural anomalies lends support to disproving the efficient market hypothesis.⁸² Behavioral finance does not support analyses on how participants in a market can make themselves better strategists or better traders.

I have argued elsewhere that the enterprise of behavioural economics that incorporates the findings of cognitive and social psychology does not have the tools to make individuals more ‘able’ or vest them with agency,⁸³ and following this general disposition, it does not have the ability to make people into better traders. The discipline can predict flaws in meeting an ideal, but cannot teach people to be competitive self-regulating units. Psychological experiments following Kahneman’s lead are methodologically constrained in making people rational, or self-regulating their responsiveness. Combining Coase’s initial insight of forming a firm to engage in markets⁸⁴ and Hebert Simon’s work on psychological constraints in reaching organisational goals,⁸⁵ the contribution of BLE to trading seems to be to bring people together and then making intra-organisational changes in order to get the best out of individuals within such an organisation (rather than assuming their rationality). As discussed in Chapter 2, the formation of ‘firm-like’ structures appears to be the way that voluntary EET schemes such as CRAGs seem to function: individuals get together and distribute responsibilities such as information gathering, carbon accounting and monitoring emissions.⁸⁶ Once such institutional attributes

⁸² For Thaler’s account of the role behavioural economics played in the world of finance, see *Misbehaving*, supra, pp. 203 – 253.

⁸³ Roy, ‘Agency as Responsiveness’, supra .

⁸⁴ Ronald Coase, ‘The Nature of the Firm’ (1937) 4 *Economica* 386.

⁸⁵ As Kahneman recently clarified, behavioural economics is not derived from Simon’s work but is nonetheless compatible. The key difference is that while Simon sought to ‘satisfice’ performance in an organisational setting given pre-determined organisational objectives, Kahneman sought to map predictable deviations of individuals from models of perfect rationality. See Simon, *Administrative Behavior*, supra, p. 240.

⁸⁶ Howell, ‘Living with a Carbon Allowance’, supra, p. 258.

are taken care of, then it may be possible to trade competitively. Literature on social norms indicates the possibility of ‘learning’ through observation and association.⁸⁷ If that were the case then individuals could – though this is pure speculation – learn how to trade within a desirable institutional setting. In any event, it seems to be safe to suggest that it would be through association that individuals could adopt an institutional rationality that allows them to either individually or collectively participate in a market mechanism. Once the ‘structural’ components of trade are taken into account, then economic experiments on emissions trading would assume relevance.

c) How People Achieve Collective Ends

In both the accounts above regarding what inferences cannot be drawn from the experiment described in this chapter, the concentration is on the individual, either with respect to the internalisation of social norms or with respect to being a strategic market player. However, like other moral issues, climate change is a collective commitment. For a neo-classical L&E scholar, an efficient outcome is guided by the invisible hand when self-interested individuals interact. Irrespective of whether one advocates or disagrees with the invisible hand hypothesis, there is no doubt that an efficient outcome is not necessarily an effective one in dealing with a commons problem. In developing a behavioural account of collective action, Elinor Ostrom argues that Hardin’s famous suggestion – that rational individuals are trapped in social situations and it is only an external intervention that can solve a commons problem – leads to bad policies.⁸⁸ Rather, the concentration should be on how co-operation is achieved through reciprocity (assessed through observation and experimentation rather than the backward induction method of theoretical models of cooperative and non-cooperative games), reputation and trust. This is true even for interacting individuals within a household; as Ellickson correctly pointed out individuals could be in different relational

⁸⁷ The classic text on the subject is Albert Bandura, *Social Foundation of Thought and Action: A social cognitive theory* (New York: Prentice Hall, 1986).

⁸⁸ Elinor Ostrom, ‘A Behavioral Approach to the Rational Choice Theory of Collective Action’ (1998) 92 *American Political Science Review* 1, p. 3.

arrangements within a household.⁸⁹ However, *contra* Ellickson, following Ostrom, there are several mediators that shape desirable co-operative action rather than assuming strategizing individuals arrive at some ‘order’ despite the nature of the relational arrangement.⁹⁰

To step inside the Beavan household once again, Mr. Beavan’s individual actions may be both cost-effective as well as emissions reducing, and the camera that might make him popular may prove to be a good incentive. However, we cannot know if the camera creates a long-term motivation, whether he is able to negotiate several film and book deals in the ‘market for incentives’ and we also cannot know what impact the camera can have on other households. Assuming (as with the EET) all households get a similar incentive (such as a camera, the promise of a movie and book deal) studying the nature of the incentive can not enlighten us as to whether (i) all households will all be willing to make concessions on their priorities to make a film indefinitely, (ii) whether they can strategically negotiate a similar movie and book deal, and (iii) whether all households will consist of accommodating family members, and whether they can all come together and co-operate in reducing emissions.

ii Tensions in Making Inferences

From the above, we have a view of what cannot be inferred from the experiment. Now the question is what can be inferred other than the very specific findings of the experiment. Can the findings be abstracted to say something general about incentives and behaviour? If the reader has attended any gathering where both psychologists and legal scholars are in attendance, the common discomfort would be with the psychologist insisting upon the limited finding of a sophisticated inquiry, and the legal scholar insisting upon applications or

⁸⁹ Robert C. Ellickson, ‘Unpacking the Household: Informal Property Rights Around the Hearth’ (2006) 116 *Yale Law Journal* 226.

⁹⁰ Carol Rose highlights Ellickson’s disregard of the relational. She reconstructs Ellickson’s household as: “the household’s participants all bring some chips to the table, in the form of capital and labor, and their different chips result in different payoff structures.” She then points out that the problem with this is that Ellickson “sidelines the intimate conflicts between spouses, and the same move allows him to give only minimal attention to larger social patterns that generally allow one spouse to bring more capital to the table than the other.” Carol M. Rose, ‘Of Natural Threads and Legal Hoops: Bob Ellickson’s Property Scholarship’ (2009) 18 *William & Mary Bill of Rights Journal* 199, p. 204.

some generalisation that can be abstracted for a policy purpose. In most cases, the tension between specificity and generalizability seems irreconcilable. This is not a problem for psychological experiments specifically, but for the use of the experimental method generally. This is evident in a debate between two of the best development economists working today – Abhijit Banerjee who uses Randomized Control Trials (RCT) to understand the effectiveness of policy interventions and the recent Nobel laureate Angus Deaton.⁹¹ Banerjee's approach is to see a problem in a policy initiative that cannot be explained by traditional economic theory. For instance, he (alongwith Esther Duflo) picks up the problem of the ineffectiveness of microfinance, and how conventional economic theory does not illuminate the problem.⁹² Despite conditions on disbursement that sought to avoid rent-seeking behaviour and training of users to fill in information gaps, the rates of return on such investment seemed abysmally low. This led Banerjee and Duflo to develop hypotheses (proxied by independent variables) as to why this might be the case and – similar to a lab experiment like the one described in this chapter – identified two random groups in the field to test such hypotheses, with one group in each instance operating as a control group. This led to some counterintuitive findings such as what matters for the rate of return is not the interest rate but the time period for which the loan is provided, and that small 'learning-by-doing' loans are not as effective as single cash transfers above a certain threshold. Innovative explanations are provided that may support such findings, such as people in poverty are motivated to take risks only when they feel loans can help their children to escape the world of small business. Deaton takes exception to this way of doing economics for policy input for methodological reasons such as selection bias among respondents who agree to participate, and the impossibly high dimensionality of drawing inferences from an experiment. Given this dimensionality, the inferences drawn do not flow from the methodology of conducting the experiment itself, but are 'just-so stories'. He also makes an

⁹¹ The recorded debate is available as 'Deaton v. Banerjee' at the NYU Development Research Institute: <https://wp.nyu.edu/dri/events/auto-draft/annual-conference-2012-debates-in-development/deaton-v-banerjee/>

⁹² Abhijit Banerjee and Esther Duflo, *Poor Economics: A radical rethinking of the way to fight global poverty* (London: Random House, 2011), pp. 157 – 181.

axiological critique –an RCT cannot by its nature address the concern of how people can be responsive to an external intervention (such as a loan); that instead would require trial-by-error learning.⁹³ In response Banerjee argues that the primary value of RCTs is to expose possible confounds in a generalised model or the expected behaviour of people behaving in an economic world of rational exchange. Deaton’s trial-and-error method may not result in smart generalisations for policy intervention; hence the preference for a piecemeal approach even if the ‘whole’ is not clear. In what may seem jarring for scientifically-minded deductive economists, Banerjee goes on to say that perhaps conducting the RCTs are not as important as the thinking that goes into the idea of causality. It is no wonder, therefore, that Deaton – who believes strong empirical work should complement sophisticated models that contribute to predictability – finds Banerjee’s approach incoherent.⁹⁴

Like Banerjee, psychologists such as Kahneman also rely on experiments to question traditional economic theory. However, Kahneman’s focus is narrower; he considers the axiomatic rational actor model as the null hypothesis, and is able to draw particular and replicable inferences about deviations. The concentration on lab experiments allows him this focus on particularity.⁹⁵ It could be suggested that the fact of replicability allows Kahneman’s lab experiments to overcome the criticism of incoherence to some extent, an advantage that Banerjee does not have in his work. Scholars who trace the development of behavioural economics suggest that the abstraction of a specific psychological finding could be achieved through the mediating authority of economic models.⁹⁶ Not all psychological experiments can be thought to have applicability for an economic purpose. It seems, therefore, that the quality of an experiment appreciated by behavioural economists is replicability. Should a finding be replicable, then it may say something about

⁹³ ‘Deaton v. Banerjee’, *supra*.

⁹⁴ *Ibid*.

⁹⁵ See discussion in Chapter 1, III, and Chapter 3, II.A.(i).

⁹⁶ Heukelom, *Behavioral Economics, supra*. Amos Tversky’s economic modelling approach made Kahneman’s work intelligible to economists. For a recent account of the different approaches, compromises and subsequent fallout of Kahneman and Tversky, see Michael Lewis, *The Undoing Project* (London, W.W. Norton, 2016).

human behaviour, and with respect to behavioural economics, a predictable bias that distorts rational behaviour. Replicability, however, is not always a sufficient consideration for utility with respect to a policy question.

If the experiment described in this chapter arrived at similar results on not only exact replication,⁹⁷ but using different proxies (other than food choice) and manipulations (other than the display of food, the textual relationship between two tasks for the control group, among others) to represent the same hypotheses, then perhaps we could say that loss aversion does not play a big role in relation to a climate incentive. From this, it is tempting to make the inference that the way allowances are allocated do not make a big difference on their utility as an incentive mechanism. It is also tempting to make the further inference that grandfathered allowances to individuals would incentivise climate-related expenses. Both of these inferences, however, cannot be made from this experiment. Having said that, these inferences are not fundamentally incompatible with the experiment. Both these inferences can be made only (i) when this experiment is replicable, and (ii) when this experiment is supported by complementary experiments that go to prove this point. The experiment, however, cannot speak to the whole gamut of factors that constitute individual motivation for climate action, nor can it speak to how individuals interact in a social context to mitigate emissions.

Given this dimensionality problem, it therefore stands to reason why experiments have been more successful such as a policy intervention that takes advantage of a bias, or field experiments on electricity bills that contain smileys.⁹⁸ Such experiments need only to be replicable in order to satisfy their utility. In fact, given the complexity of (i) and (ii), the epistemic costs of drawing policy inferences about an EET scheme from an experiment such as this one seem extremely high. The phrase 'epistemic costs' has been used to signify both information costs incurred to gain knowledge to effectively

⁹⁷ I am indebted to Maarten Derksen at the Faculty of Behavioural and Social Sciences, University of Groningen, to point me to the complexities of replication. Some of the major debates can be found in the special edition of *Perspectives on Psychological Science* on 'Replicability in Psychological Science', available at: <http://pps.sagepub.com/content/7/6.toc>.

⁹⁸ In these experiments, replicability can be satisfied by carrying out the experiment in different geographical settings or residential areas.

respond to climate change, as well as the opportunity costs of investing in certain forms of expertise in relation to a subject.⁹⁹ Theoretically, multiple experimental results may reduce the epistemic costs from the perspective of dynamic efficiency (as seems to be the general motivation behind the EU's experimental regulation paradigm discussed in Chapter 6), but should there be other constraints, then it may be preferable for regulators not to bear a particular epistemic burden.

iii. Costs of Drawing Inferences

In the above sections, we considered what can be inferred, and the tensions that are involved in making inferences. It was suggested that given the epistemic costs of drawing inferences, it may be inadvisable to conduct a series of experiments that could illuminate the effectiveness of an EET scheme as an implementation mechanism. But what are these costs, one may ask? How are they assessed? Drawing on Cartwright, I would like to suggest that epistemic costs can be looked at comparatively. Two criteria could be useful in assessing whether the costs of an experiment can be said to be comparatively low: (a) if the hypothesis implies the intervention in question,¹⁰⁰ and (b) if the intervention can be cheaply implemented. It was suggested in Chapter 2 that the costs of implementation of an EET following a downstream implementation and an upstream monitoring mechanism are not too high. Thus (b) seems to be well placed.¹⁰¹ Regarding (a), the hypothesis here does not enjoy the support of a strong inference method, and an intervention such as an EET scheme is multi-dimensional in nature, some of which was suggested in the inferences that cannot be made. The epistemic costs of using behavioural economics for market-making structurally seem to be comparatively higher than the costs of predicting biases within an established framework (using the functioning rational actor as the null hypothesis). The

⁹⁹ More generally, Yalcintas considers both resources and time in gathering expertise, as well as 'epistemic resources forgone' if one had opted for other ways of generating knowledge. Altug Yalcintas, 'The Problem of Epistemic Costs: Why do economists not change their minds about the 'Coase Theorem?'' (2013) 72:5 *American Journal of Economics and Sociology* 1131.

¹⁰⁰ Nancy Cartwright, 'Evidence-based Policy: What's to be done about relevance?' (2009) 143 *Philosophical Studies* 127, p. 129 and p. 134.

¹⁰¹ It will be suggested in the next chapter that implementation is not the whole story regarding a policy intervention.

epistemic costs of using a piecemeal experimental approach like this one appear to be high. The opportunity costs may be assessed in relation to ‘competing theories’ that could be empirically assessed using similar methods, or whether similar theories may be assessed using ‘competing methods’.

Drawing on this idea of epistemic costs, we can also possibly think of epistemic benefits that could be achieved. High epistemic costs can still yield a policy benefit that cannot be captured in the scholarly benefits of epistemic costs. In this regard, if the experimental method can speak to policy design, then it might be worthwhile to incur such costs. One of the major attractions in the application of cognitive and social psychological experiments to policy initiatives such as nudges or default organizational interventions (such as a default printing rule) has been the low costs of translating a finding into a policy alternative. Thus, *what may be a problem in epistemic costs is offset by the low costs of translation into policy design*. In comparison, lab experiments on incentives that can influence climate-neutral strategic behaviour have significantly higher translation costs. If the goal is to reduce emissions from individuals, this benefit can better be obtained by incurring epistemic costs where empirical studies lend themselves easily to translation. The way the costs of inference may be assessed in advance is by following Cartwright’s insight about the relationship between the hypothesis and the policy intervention. This is true for some experimental applications (as discussed above), but not true for others. The high costs of translating some experimental studies into policy design has been noted by Douglas Kysar’s review of the working of the Office of Information and Regulatory Affairs (OIRA) of the Obama Administration, spearheaded by Cass Sunstein, the body that inspired similar agencies such as the Behavioural Insights Team in the UK.¹⁰² While a prominent advocate of BLE and the attention to context that BLE has brought in,¹⁰³ Kysar finds that it is possible that ‘the addition of behavioral sciences seems only to have given industry more weaponry with which to delay regulations and fudge calculation

¹⁰² Douglas Kysar, ‘Politics by Other Meanings: A comment on ‘Retaking Rationality Two Years Later’ (2011) 48:1 *Houston Law Review* 43.

¹⁰³ Douglas Kysar, ‘Taking Behavioralism Seriously: Some evidence of market manipulation’ (1999) 112 *Harvard Law Review* 1420.

of their impacts.¹⁰⁴ He arrives at this conclusion after examining the OIRA's involvement with regard to implementation of a fuel efficiency consumer information programme where OIRA rejected the programme as the focus group and survey methods used were considered to be insufficient without 'scientifically valid experiments'. Thus, the burden of proof with regard to any regulatory intervention may be acquitted based on such experiments. A more problematic issue is how this burden of proof may be met, and that usually turns on the interpretation of evidence. With respect to whether coal ash can be categorised as 'hazardous waste', the OIRA pointed out that such categorization can cause a 'stigma effect' which would significantly reduce the benefits of recycling such materials. Kysar notes that the 'stigma effect' has featured in Sunstein's work where a reference was made to the primary experimental study on the stigma effect where participants in the experiment refused to drink juice from a glass that had a cockroach despite assurances that the glass had been completely sterilized. Kysar asks whether it is advisable to 'extrapolate from a study on cockroach juice' to the health costs and benefits of coal ash reuse. To apply the framework developed above, the costs of translation in such a case seem too high to require experimental research and then translating such research into the policy measure in question.

How do we know, therefore, whether a study might have high epistemic and translation costs? Following Cartwright, the inferences drawn from experiments with a strong hypothesis may demonstrate low epistemic costs. Should the hypothesis and the relationship with the policy question in mind be a layered one, then it may be useful to warrant against bearing such translation costs. However, the concept of inference costs cannot answer questions regarding devising standards of proof or allocating the burden of proof. A legal answer to this question is that the precautionary principle determines the amount of epistemic and inference costs to be incurred keeping in mind the benefit the precautionary principle is trying to attain. Having said that, the precautionary principle can be interpreted and applied in different ways; Sunstein's preference for a risk-assessment view of the precautionary

¹⁰⁴ Kysar, *supra*, p. 56.

principle¹⁰⁵ may indicate his inclination to accept high epistemic costs. I have argued elsewhere that the moderating value of protecting people from the hazards of climate change warrants an allocation of the burden of proof to the party advocating less activity with regard to climate action.¹⁰⁶ More or less action, however, is not a signifier of appropriateness. The rest of this book concentrates on how to think about the appropriateness of an EET scheme.

IV. CONCLUSION

It was discussed towards the beginning of this chapter that we are interested in 'public responsiveness'. This category of study cannot be assessed solely through a stated preference approach. Further, given that the rational actor axiom cannot be taken for granted, BLE studies seemed to be the way forward. Within this discipline, the experimental method was selected.

In relation to experimentally assessing facets of an EET, the nature of an incentive sought to be understood as this is a gap in the literature on how individual behaviour may be influenced by incentives to secure certain goals. The results were inconclusive; as much as I would like to conclude following the experiment that the way in which the incentive is earned or allocated does not make a difference, that conclusion cannot be drawn.

The conclusion that can be drawn, however, is that the experiment fails to deliver behavioural evidence to suggest that loss aversion plays a role in relation to a climate change incentive. Whether this can be abstracted into a policy conclusion that would have predictive value for an EET is a question that cannot be answered given the constraints of the experiment. For this, there is a need to apply other analytical tools to assess external validity. In this regard, I sought to demonstrate what cannot be inferred, the tensions of inference and the costs of inference.

¹⁰⁵ See Cass Sunstein, *Laws of Fear: Beyond the precautionary principle* (Cambridge: Cambridge University Press, 2006). For a critique, see Dan Kahan, Paul Slovic, Donald Braman and John Gastil, 'Fear of Democracy: A cultural evaluation of Sunstein on risk' (2006) 119 *Harvard Law Review* 1071.

¹⁰⁶ Roy and Woerdman, *supra*.

5

POLITICAL CHOICES REGARDING AN EET*

5

As discussed in Chapter 2, there is a need to appreciate the political acceptability of an EET scheme. Studies on similar schemes such as the PCT system have left the question of regulatory opinion unexamined. This chapter, therefore, is a first attempt to address the issue of political acceptability. Much like the reticence in Chapter 4 in equating peoples' choices with public acceptability, this chapter too concentrates on analytical themes in understanding political choices rather than concentrating on public acceptability based on stated preferences. Contrary to recent work on BLE and institutional decision-making,¹ however, I show that methods used to understand individual behaviour cannot be translated into regulatory behaviour. Specifically, I argue that there is a compelling case for paying attention to the stated preferences of regulators as the stated preference or reason-giving *is* regulatory behaviour.

* The section on 'Hard-wired Biases' discussed in this chapter draws on Giulia Mennillo and Suryapratim Roy, *Ratings and Regulation: An irreversible marriage?* Harvard Weatherhead Centre for International Affairs Working Paper 004/2014.

¹ Among the more detailed studies is Anne van Aaken's application of behavioural economics to international law. Though van Aaken is careful about the problems of applying individual decision theory to international relations, the analysis nonetheless maps research on individual biases to political actors to supplement rational choice approaches. Anne van Aaken, 'Behavioural International Law and Economics' (2014) 55 *Harvard International Law Journal* 421.

Having said that – and picking up on a couple of responses to a pilot survey conducted – studying the political economy of regulation is a meaningful way of assessing political behaviour. In this regard, I make an analytical move in arguing that BLE points to constraints on the rational institutional actor in public choice as well; unlike the conventional concentration on the psychological make-up of individuals who serve as regulators and other institutional actors, I argue that the constraints on rational or strategic decision-making may be in the form of ‘discursive capture’ of such institutional actors. Analogous to psychology-informed interventions such as nudges that desirably moderate individual choices, I further suggest that there could be mechanisms for preventing discursive capture. Given that the possibility of discursive capture applies to the way commentators like myself reason about regulatory choices such as the EET, I end with a reflective note on the possibility of discursive capture in concentrating solely on either ‘efficiency’ or ‘fairness’ as the organising principle of regulatory reasoning.

I. GAUGING POLITICAL ACCEPTABILITY THROUGH STATED PREFERENCES OF REGULATORS

Considering the application of behavioural economics to political decision-making brings to mind studies on the effects of meals on judges’ mood,² or essentially cognitive processes that adversely influence the nature of decisions. It may be suggested from such studies that the scope for discretion by legal decision-makers should be tempered. This appears to be the conclusion from a recent study on the biases of American judges by the prolific Jeffrey Rachlinski.³ There is one clear problem with the application of these studies: they do not take into account the *responsibility of regulators to rationalise their decisions*. Reasons constitute the desirable anchor of the regulatory process. Individuals are susceptible to shape their behaviour and responses

² Shai Danziger, Jonathan Levav and Liora Avnaim-Pesso, ‘Extraneous factors in judicial decisions’ (2011) 108: 17 *Proceedings of the National Academy of Sciences of the United States of America* 6889-6892.

³ Jeffrey J. Rachlinski, Andrew J. Wistrich & Chris Guthrie, ‘Can Judges Make Reliable Numeric Judgments? Distorted Damages and Skewed Sentences’ (2015) 90 *Indiana Law Journal* 695.

in the shadow of invisible or primed ‘anchors’ or reference points.⁴ In legal systems that accord primacy to justification, the need to reason should serve as the anchor.⁵ We saw in Chapters 1 and 4 that the reasons individuals or groups give for their decisions are biased, and may have little bearing on their behaviour. However, for legal institutions, reason-giving *is* their behaviour. To put it differently, the achievement of a public good depends on how people behave and not the way they rationalise (hence the argument for assessing ‘public responsiveness’ rather than ‘public acceptability’ mooted in Chapter 4). However, individuals who in a legal or regulatory capacity formulate or mediate the public good, it is necessary to provide reasons *despite* their individual psychological make-up or biases. For public officials, there is no justification to discount their opinions or the giving of reasons, as such opinions or reasons are considered to be the behavior against which they are assessed. In fact, the solution to the studies regarding cognitive causes above is for legal decision-makers to provide reasons intelligible to the public to which they are accountable, against which their bias could be assessed. This is why materials such as press releases, legal briefs, speeches become evidence to assess the ‘psychological make-up of States’ under public international law.⁶ The understanding of the psychological element here is very different from the cognitive⁷ one we have considered in Chapter 4. This is why I am hesitant in

⁴ For a review, see Adrian Furnham and Hua-chu Boo, ‘A Literature Review of the Anchoring Effect’ (2011) 40 *Journal of Socio-economics* 35.

⁵ In a conference I posed this question to Professor Rachlinski, as to whether the opportunity to reason could influence the decisions given by judges. He was of the opinion this could be the case if judges were allowed to use reasoning ‘anchors’ than the numeric ones he considered for his study. Admittedly, there is debate on the informational relevance of the anchors in question; i.e. it is not necessary that the issue on which the anchor is based necessarily correlates with the issue on which the response is generated. *Ibid.*, p. 38.

⁶ The reference here is the establishing of *opinio juris* as a component of customary international law. Tim Hillier, *Sourcebook on Public International Law* (London: Cavendish Publishing, 1998), p. 76. The authoritative formulation of *opinio juris* as an integral component of customary international law is usually attributed to the Nicaragua (Merits) case before the ICJ. *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*. Merits, Judgment. I.C.J. Reports 1986, p. 14.

⁷ Banakar makes the distinction between cognitive and non-cognitive causes behind behavior contrary to morality; thus prejudice is characterized as a cognitive cause behind discrimination while ‘rational economic action’ or ‘political reasons’ are characterized as non-cognitive causes.

accepting cognitive causes to assess political acceptability, and why it might be beneficial to inquire into the stated preferences of political institutions using surveys, interviews or statements issued.

Notwithstanding the above argument for appreciating reason-giving as the primary form of regulatory behavior, it could be argued that public institutions use ‘paper tigers’ including directives, regulations and cases to legitimize or deceive those they allegedly represent or decide on behalf of. This brings us back to the public choice concerns, where the process of collective or institutional decision-making may be construed to operate despite the reasons given. Thus, if BLE has some explanatory potential for public choice, then we might see the utility for such a framework for *appreciating political choices, as against mere political acceptability*. Writing more than a decade back, the political scientist Jack Levy pointed out that ‘determining whether his [Kahneman’s] theory of individual choice can be extended to the strategic behavior of collective actors, and tested empirically against observed behavior in real-world settings remains a formidable task for future research.’⁸ Since then attempts have been made by scholars working within political psychology to work towards this formidable task⁹ both in the context of internal decision-making of a legal system, and in relation to foreign policy.¹⁰ This literature has proceeded largely to demonstrate two applications: (i) even if political actors represent collective interests, their policy-decisions can nevertheless be explained by hardwired individual biases that behavioural economics seeks to

Reza Benakar, *The Doorkeepers of the Law* (Aldershot: Ashgate Publishing Company, 1998), p. 119. The term ‘cognitive’ may, however, be understood differently from other standpoints; one notable instance is its use as a discursive orientation that prompts Black’s argument for requiring a shift in one’s cognitive framework in thinking about political issues. Julia Black, ‘Seeing, Knowing, and Regulating Financial Markets: Moving the Cognitive Framework from the Economic to the Social’, LSE Law, Society and Economy Working Papers 24/2013.

⁸ Jack S. Levy, ‘Daniel Kahneman: Judgment, Decision, and Rationality’ (2002) *2 Political Science & Politics* 271, p. 273.

⁹ For a review of this endeavor, see David P. Redlawsk and Richard R. Lau, ‘Behavioural Decision Making’ in Leonie Huddy, David O. Sears, and Jack S. Levy eds. *The Oxford Handbook of Political Psychology* (Oxford: 2nd. ed, Oxford University Press, 2013).

¹⁰ Uri-bar Joseph and Jack S. Levy, ‘Conscious Action and Intelligence Failure’ (2009) *124:3 Political Science Quarterly* 461.

expose.¹¹ It stands to reason that to make this argument, it has been necessary to show that there has been sufficient individual discretion or power to make idiosyncratic executive decisions; and (ii) the phenomenon of ‘group-think’ or decision-making by a collective entity has been experimentally shown to be no less prone to mistakes than an individual making decisions.¹² Some of the studies used to illuminate both cases – individual decisions by politicians and decisions made by groups – use Prospect Theory to demonstrate that political decisions made can be unnecessarily risky, high-cost alternatives are opted for without any increase in value.¹³ In all these studies there is a comparison of the political decisions made with the ex-post assessment of consequences. Thus the use of behavioural economics in studies of political decision-making is not the same as its use in individual decisions. For studying political decision-making on a particular issue, we either need an ex-ante assessment of what would be a reasonable decision, or an ex-post assessment for a policy (or legal decision or statement of collective import) that has been around for a while. For a PCT or an EET, we do not yet have this proposal that can be deemed to be reasonable or rational. This need for a reasonable yardstick brings us back to the use of the stated preferences approach, and the decision to survey experts against which political opinion can be assessed.

II. THE IDEA OF SURVEYING REGULATORS AND EXPERTS, AND THE PILOT STUDY

A clear distinction between rational justification and political justification is obviously untenable as is clear from the entirety of the book, as any justification regarding responsibility, liberty, or expert knowledge is clearly a political issue. Having said that, this distinction may be useful if we were to confine the

¹¹ Matthew Fuhrmann and Bryan R. Early, ‘Following START: Risk acceptance and the 1991–1992 presidential nuclear initiatives’ (2008) 4.1 *Foreign Policy Analysis* 21–43.

¹² Norbert L. Kerr and R. Scott Tindale, ‘Group performance and Decision Making’ (2004) *Annual Review of Psychology* 623–655.

¹³ For an overview of the use of Prospect Theory in political psychology see Barbara Vis, ‘Studying Political Decision-Making Using Prospect Theory’, paper presented at ECPR General Conference, Postdam, Germany, July 2009, available at: http://www.barbaravis.nl/ECPR_Political_Psychology_Vis_final.pdf.

idea of the political to the regulatory process, namely institutions and officials of government, how they approach an issue, and how they decide. This is the view that motivates conducting a survey in order to gauge the political acceptability of an EET scheme.

A. Conducting the Pilot Study

The approach adopted in the study to determine the perception of regulators is one of surveying regulators, and thus the primary preparatory work is of identifying appropriate regulators and ferreting out an appropriate survey design.¹⁴ For the pilot phase, the respondents were researchers based in faculties of law, economics, philosophy, sociology and psychology in the University of Groningen and experts in different universities and research organisations who have worked on Personal Carbon Allowances and Tradable Energy Quotas (n=19). I am aware that the sample size for the Pilot Study was decided arbitrarily; but given that I did not have to differentiate between the participants and did not seek to conduct a feasibility study,¹⁵ I did not follow a sophisticated methodology in selecting the members and size of the participants of the study. Pretesting procedures primarily in the form of qualitative feedback was sought from the respondents of the pilot survey. Such feedback was in relation to interpretation of questions, time taken to respond, and suggestions solicited for improvement of instrumentation. With regard to instrumentation, responses were sought to mostly close-ended (dichotomous and rated) questions. The luxury of the interactional nature of correspondence that a Pilot Study affords allowed feedback through follow-up emails and conversations in person.

i. Methodological Concerns

The difficulty with any survey; or indeed any method to assess stated preferences; is that it may be tainted by the various biases of the researchers

¹⁴ I benefited immensely from the European Consortium of Political Research Summer School courses in 'Qualitative Research Methods', University of Ljubljana, 2013 in writing this chapter.

¹⁵ Feasibility studies are small scale trial runs of the larger study. This is narrower in breadth from a general pilot study that has the purpose of obtaining input on methodology, assumptions and content. It is also to way to assess the difficulties respondents face in tackling the questions. David De Vaus, *Surveys in Social Research* (3rd edn, London: UCL Press, 1993), p. 54.

and respondents. As far as researcher bias is concerned, the challenges of reliability and validity lie generally in relation to conversational, cognitive and motivational processes that underlie how questions are asked and interpreted; such bias manifests in designing surveys and drawing inferences. Specifically, problems may be encountered in: (i) Defining the continuum of the rating tasks within which respondents place themselves, as it is difficult to confidently assert that the factors identified are the most salient; and (ii) Framing dichotomous questions.¹⁶ This is why there were several rounds of revisions of the survey, including how the continuum of the rating tasks was designed. The Likert response scale was preferred to the semantic differential rating approach to do away with dichotomous categories in questions asked. Given the need to make the survey simpler, dichotomous questions were unavoidable, but control questions to check for framing were inserted such as the following:

The scheme is fair towards lower income groups as they can sell allowances

The scheme is fair towards higher income groups as they can buy allowances to keep emitting

The only dichotomous question asked where framing was not interrogated was the cumulative one right at the end: do you think an EET is a good idea. This question was complemented with a similar continuum question right at the beginning: the idea was to allow the respondents to rethink their opinion once they considered various components of such a scheme.¹⁷

With regard to respondent bias, research on surveys conducted by political scientists has demonstrated that there are two primary concerns: Question Ordering Effects and Question Wording Effects, which explains the experimental turn in surveys.¹⁸ Survey experiments, in brief, entail a

¹⁶ Royce A. Singleton, Jr. and Bruce C. Straits, *Approaches to Social Research* (5th Edition. New York: Oxford University Press, 2010), pp. 269 – 270.

¹⁷ There was admittedly the possibility of an avoidance of cognitive dissonance on the part of the respondents; respondents may not have liked to see themselves as opinion-changers. I took this risk in a web-based survey because the respondents would probably not make the effort to go back all the way to see what box they ticked on the continuum on the first page.

¹⁸ Stephen Ansolabehere and Shanto Iyengar, *Going Negative: How Attack Ads Shrinks and Polarize the Electorate* (New York: Free Press, 1995).

deliberate manipulation of either the form or placement of items (or both) in a survey instrument by incorporating methods such as priming questions used in psychological research. However, such survey experiments are utilised to assess public opinion of the electorate in relation to policy choices, and the samples are usually random. This project does not proceed along such lines as it does not seek to expose whether the actual preferences of the respondents are different from their stated preferences- an exercise which would be useful if the voting tendencies of the groups studied were to be assessed. Admittedly, the responses could be affected by the framing and wording of the questions, but instead of creating two separate treatment groups, we employ a control group to contrast the stated preferences of regulators. This is what led us to the idea of *surveying regulators and using experts as a control group*. This distinction was not maintained for the Pilot Sample, but the intention to do so was communicated to the respondents.

ii. Content of Survey

The intention was to devise a comprehensive questionnaire where different properties of an EET would be put forward and respondents requested to comment on the same. The contents may be explained as follows:

Previous Experience of Respondents

- a) *Precedent*: the regulator's experience with similar proposals and their fate.
- b) *Analogous instruments*: the regulator's experience with such analogous policy measures were solicited. It was decided that specifics will not be brought to their attention; alternatively, instead of embarking on such self-selection, the regulators may be requested to identify analogous measures.
- c) *Experiences and issues with the EU ETS*: given the EU ETS would directly or indirectly influence the EET, views regarding the functioning of the EU ETS would be sought.

Design Questions

- a) *Assessment of such a scheme as against a tax*: this would have implications from legal, economic and behavioural perspectives.

- b) Nature of the instrument: not only is the question as to whether an EU ETS allowance would constitute property unresolved, but it is also unclear whether it is an investment or a financial instrument. Theoretical debates regarding whether an ETS unit is a commodity or currency has practical implications. The same questions would also apply to an EET scheme.
- c) Permit or credit: As there is now research on the distinction and efficiency implications of permit and credit based schemes, it is hoped that the questions provided may lead the respondents to consider whether the scheme would be more in line with a permit scheme such as EU ETS or with a credit scheme such as the CDM.
- d) Tradability: This has two components. The first is whether allowances should be allowed to be traded at all. The second component is whether the EET should be linked to the EU ETS.
- e) Market design: It needs to be determined how trading is to be facilitated; this includes the nature of the transactions that are contemplated (i.e. whether futures trading would be permitted—this is linked to the issue regarding the nature of the units) and the nature of the institutions that would facilitate such transaction. This is complemented by a question regarding linking with the EU ETS.
- f) Geographical scope: I hypothesised that regulators in different jurisdictions in the European Union may provide different responses to the questions asked. I further hypothesised that EU regulators would provide answers very different from national regulators.
- g) Sectoral scope and coverage: One of the major unexplored questions in an end-user scheme is regarding which activities would be covered. Policy design in this regard would need to take into account the thickness of markets, how to include non-point sources in a regulatory scheme and double counting.
- h) Implementation (Penalties): The issue of non-compliance requires consideration. In this regard, regulators' opinions on a penalty similar to the EU ETS and a default tax system would have to be sought;

- i) Implementation (Administrative costs): This would include measurement, monitoring and institutional supervision.
- j) Interface: Thoughts on how people would be required to engage were solicited.

The final draft of the Pilot Survey circulated was very different from the first one. As I discussed the contents primarily with Edwin Woerdman and Oscar Couwenberg and suggested alternatives, the survey was substantially altered and shortened. For a list of the participants of the Pilot study and a copy of the Pilot questionnaire that was circulated, please see **Annexure 2.1**.

B. Responses to the Pilot Study

Fundamental Observations: One respondent made a fundamental observation regarding the purpose of the study itself, rather than details regarding the execution of the project. She was of the opinion that the assessment of political acceptability would be difficult to be meaningfully ascertained by way of a survey.¹⁹ One suggestion to address this issue may be to insert open-ended questions on political support within a particular party, within the legislature generally, and in relation to public support generally. If I reconstruct the exchanges with this respondent, the observation was that political interests cannot be revealed in a survey, but need to be analytically ascertained following a political economy approach. Another respondent observed that the complexities of a new policy-mechanism such as the EET can affect the attitude of regulators.²⁰ Regulators in Member States are already dealing with the complexities of the EU ETS itself and the EU ETS is in many ways much less complex than the challenges the EET faces. Given this burden, the time may not be right to divert attention to another yet more complex policy mechanism.²¹ Without reading too much into this respondent's comment, perhaps the burden of considering yet another complex climate policy would affect the response rate to the survey.

¹⁹ Correspondence with Respondent 15; on file with the author.

²⁰ Correspondence with Respondent 9; on file with the author.

²¹ It may be noted that owing to the changing experimental nature of the EU ETS such as the recent shift to an auctioning system in Phase III, or the problem of over-allocation still being fixed, the set-up costs of the EU ETS cannot be assumed to be zero.

- i) Methodological Observations:* Comments on the design of the survey were mostly positive. One criticism was that the description of an EET provided may not provide sufficient information for the respondent to answer the questions; in such event, the ‘survey responses would be worth little more than noise.’²² The suggestion was that perhaps semi-structured interviews would be the way to cultivate interest and guide respondents through the survey. This is similar to another comment, where a respondent declined to fill up the survey as it required specialised knowledge.²³ Another observation that may be considered substantive points to the assumptions in the framing of questions: instead of asking about Sectoral Scope, would it not be more appropriate to ask ‘who should do what or who should be responsible?’²⁴
- ii) Substantive Observations:* One respondent took the trouble to read my co-authored paper available online on EET that served as a background document (the paper is substantively the same as Chapter 2) for the survey. On reading the paper and examining the survey, he had the following (reconstructed) comments on fairness and distributional concerns of an EET that are not adequately addressed, and even seem irresolvable:²⁵ (i) Concentrating on methods of allocating (such as through auctions) or administrative costs do not address the issues of distribution of entitlements. This concern does not feature in the paper and therefore is not reflected in the survey; (ii) there is an assumption that individuals can all equally make informed choices about an opt-out option and participate in allocation mechanisms such as auctioning schemes. Another respondent pointed out that the survey did not make a distinction between direct and indirect emissions, and this could have an effect on the fairness of the scheme.²⁶ The workability of end-user emissions trading as compared with a tax-based approach was questioned by one respondent. A tax that that could ‘simply build the incentive into

²² Correspondence with Respondent 11; on file with the author.

²³ Correspondence with Respondent 18; on file with the author.

²⁴ Correspondence with Respondent 7; on file with the author.

²⁵ Correspondence with Respondent 14; on file with the author.

²⁶ Correspondence with Respondent 5; on file with the author.

the prices end-users pay for goods and services' was found to be preferable to an EET;²⁷ the only reason to opt for an EET rather than a tax is political acceptance as a carbon tax is nearly impossible.

III. THE SURVEY

This section while expected to be the heart of this chapter will prove to be a disappointment. To cut a long story short, I could not analyse the responses to the survey in detail – especially since several questions required a rating that would require a large sample for a reliable distribution – primarily due to the low response rate. Out of the 300 potential respondents contacted, I received 22 responses. Further, as there were several more experts than regulators, the idea of checking for regulator bias through a control group would not be possible. Having said that, allow me to briefly describe the process. Given the positive responses regarding the design of the Pilot Study, I made minor alterations to the survey. Unlike the Pilot, however, selection of my sample was more crucial. As briefly mentioned earlier, I decided to have an 'Experts' group as a control group. Regulators are political creatures who make political choices, which cannot be predicted from their responses. Essentially, this is an information asymmetry problem similar to used-car salesmen in the 1960s, they know more than the public and may not be willing to divulge information. Further, regulatory choices may be political choices which are situation and context-based, subject to negotiation and compromise. Thus, the opinions of regulators may not be reliable, and may not even be trusted. I attempted to address this issue in two ways: first, the survey itself is divided into two sections – one in which the participants are requested to express their views in an agentic capacity, and in the other section, they are requested to express their personal views. Second, the survey of regulators is complemented by a control group survey. I identified and surveyed a select group of experts including academics and practitioners who could provide reasoned views on the subject. I sought to compare the responses by regulators and the expert control group.²⁸ **Annexure 2.2** details the selection of EU regulators, Member

²⁷ Correspondence with Respondent 11; on file with the author.

²⁸ Commentators have also observed that surveys in political science usually lack a control group, and that is sought to be remedied in this paper. Brian J. Gaines, James H. Kuklinski

State regulators and Experts. A summary of the responses received is also attached as **Annexure 2.3**. Some of the answers were supported by a significant percentage of the respondents, and those may be worth noting:

1) **Sectoral Scope:** Fuel Consumption for Private Vehicles (65.2%), Electricity Consumption (73.9%) and Gas Consumption (69.6%) were favoured.

2) **Governance** (*EU, National, Municipal*): National determination of capping individual emissions (55%), national enforcement (70%), national settlement for disputes (60%). No strong preference for allocation of allowances.

3) **Fairness Concerns:**

- Participation should be *mandatory* (61.9%) with an *equal number of allowances* for every citizen (66.7%) *excluding children* (61.9%).
- People should be able to *buy and sell allowances* (90.5%). The EET is unfair to people who are *not financially literate* (65%).
- The scheme is fair towards *lower income groups* as they can sell allowances (60%) and fair towards *higher income groups* as they can buy allowances to keep emitting (80%). It should be noted that this question was met with unreliable responses, as they changed according to the way the question was framed, though the content sought to be captured was essentially the same.
- The EET is unfair to people living in *rural areas* (70%), unfair to people living in areas of *extreme climatic conditions* (66.7%).
- It is *not advisable to settle complaints about fairness judicially* on a case-by-case basis (88.9%).
- A *carbon tax* would be more equitable (66.7%), and so would *renewable energy subsidies* (75%). No strong preference for energy efficiency standards.

4) **EU ETS Concerns:**

- EU ETS *not the most effective policy instrument* in dealing with emissions (76.2%), *higher administrative costs* if EET is made part of the ETS (78.9%).

and Paul J. Quirk, 'The Logic of the Survey Experiment Reexamined' (2007) *Political Analysis* 15: 1-20

- EU ETS markets *too complex* for lay people (63.2%); people *would not have more choices* if EET is part of EU ETS market (62.5%).
- Sectors for an EET are *different for the sectors under an EU ETS*, so compatibility would be difficult (82.4%). EET covers sectors *not covered by the EU ETS* and hence there would be no conflict (70.6%). It should be noted that both these questions were put in to control for framing; so this question received unreliable responses as they differed according to the framing of the question, though the content sought to be captured was essentially the same.
- The EET should not be part of the EU ETS (84.2%).

5) **System Design:** Most of these questions were rated along a Likert scale and hence I refrain from reporting them owing to the low response rate. One response that may be noted is a strong preference for *No opt-out mechanism* (81.3%). Following Raux and Marlot, it was suggested in Chapter 2 that the opt-out could be a possible solution to the difficulties of enforcing a cap-and-trade system for households;²⁹ a strong preference against this system would make enforcement tricky.

One regulator explicitly declined to fill out the questionnaire owing to disenchantment with the EU ETS.³⁰ Only one respondent (currently an ‘Expert’ but an erstwhile EU Regulator) provided comments in addition to filling up the survey.³¹ This respondent felt there were two major concerns with an EET: “(1) carve out emissions already covered by the ETS (electricity & heat) [the ‘double counting’ problem], and (2) make it simple enough for my mother to manage without her computer (...).” He further observed that a carbon tax would be theoretically sound but difficult to implement legally at the EU level (something I discuss in Chapter 6) and politically at the national level.

It would be difficult to report the findings of the survey as reflective of the political opinion of regulators in EU Member States owing to the

²⁹ See Chapter 2, Section IV.C.

³⁰ As the survey was anonymised except designation, I hesitate to disclose the details of the respondent. Correspondence on file with the author.

³¹ The respondent is currently a Visiting Fellow at Oxford University and was formerly a member of the European Commission for Climate Policy.

low response rate, Having said that, it is not difficult to identify the need to explore some issues³² based on the stated preferences: the properties of mandatory participation coupled with the trade of allowances seem essential, fuel, electricity and gas consumption seem to be the preferred activities, there seems to be a general apprehension that an EET is unfair, and the complex association of an EET with the EU ETS needs to be explored. We will explore these issues over the course of this chapter and the next two chapters. Some of them can be better appreciated by assessing the making of political choices, rather than examining stated preferences regarding political acceptability.

IV. GAUGING POLITICAL CHOICES BY ANALYSING THE POLITICAL ECONOMY OF REGULATION

In keeping with the Fundamental Criticisms to the Pilot Study and the fact there was substantial regulatory indifference to the survey, I wish to explore the possibility of a political economy of EET in an attempt at appreciating how political choices with regard to an EET may be brought about. Admittedly, assessing political choices is not epistemologically straightforward, as there could be myriad ways of studying how regulators approach an issue and make a decision.³³ One way of approaching the subject is to see how gaining public acceptability may shape political choices. Thus, much like Mr. Beavan's camera, regulators may feel the force of an implicit electorate in making policy choices. The regulatory interest in a PCT, for instance, may not have arisen if David Miliband was not trying to align his proposed regulatory approach of an environmental contract between the State and citizens with a wave of

³² This orientation to qualitative research is akin to Lopes' view discussed in Section IIA of Chapter 3 where even if 'seeing the data' may be controversial in experiments that use the strong inference method, they still bring to light variables that may have gone unnoticed. A similar line of reasoning is adopted by Banerjee in relation to RCTs where what is more important than the results of the actual experiments is the thinking that it generates regarding causality and the possible confounds that interfere with generalised models. See discussion in Section IIID of Chapter 4.

³³ For a classic treatment of policy-making processes, see Deborah Stone, *Policy Paradox: The art of political decision-making* (New York: W.W. Norton, 3rd ed, 2012).

environmental populism.³⁴ There is no evidence, however, to suggest that elections in the UK or elsewhere have been won based on preferred climate change policies. It would also be presumptuous to suggest the absence of the separation of powers between legislative and regulatory bodies; on the contrary, for systems like the EU, regulation appears to be more influenced by competing special interests than the need to keep the electorate satisfied, as is borne out in discussions on the EU's 'democratic deficit'.³⁵ It may be meaningful, therefore, to consider the influence of different interests in the formulation of regulation.

Internationally climate change is seen as a public bad with political actors attempting to strategically negotiate restrictions on national responsibility for a commons problem, as well as fulfil ancillary interests such as national energy security through international climate change policy. This motivates the line of reasoning adopted by Posner and Weisbach regarding the interests that are served by international climate treaties; as it is crucial to have a climate treaty with which major emitters comply, the treaty is hostage to the interests of the major emitters.³⁶ In a similar vein, Anatole Boute argues that it is the political interest of maintaining its future energy security that characterises EU's international climate change and energy efficiency policies.³⁷ Internally, the EU could be said to be somewhat different; although Member States are political actors, the constitutional nature of the EU involves the utilisation of reason – or a 'culture of justification'³⁸ – in the provision of public and primary

³⁴ Matthew Lockwood, 'A Tale of Two Milibands: From Environmental Citizenship to the Politics of the Common Good' (2010) 81 *Political Quarterly* 545.

³⁵ See for instance Davies who argues that EU elections have a low voter turn-out than national elections due to the EU's inability to appreciate and foster the 'expressive capacity' of EU citizens. Gareth Davies, "The Expressive Deficit of EU Law" in Dimitry Kochenov, Andrew Williams and Grainne de Burca (eds). *Europe's Justice Deficit?* (Oxford: Hart Publishing, 2015).

³⁶ Eric Posner and David Weisbach, *Climate Change Justice* (Princeton, NJ: Princeton University Press, 2010), p. 6.

³⁷ Anatole Boute, "The EU's Shaping of an International Law on Energy Efficiency, in Dimitry Kochenov and Fabian Amtenbrink, eds., *The EU's Shaping of the International Legal Order* (Cambridge: Cambridge University Press, 2013).

³⁸ The phrase may be attributed to Etienne Murienk in his work on locating individual freedom within the achievement of social interests. Cohen-Eliya and Porat suggest that this is

goods; such reason moderates the collective action problem of a continuous battle of competing interests. The legal equivalent of *public finance theory* that seeks to normatively³⁹ arrive at optimal levels of public goods appears to be to the optimal allocation of competence through subsidiarity on one hand, and the application of the proportionality principle on the other to achieve primary goods in an optimal way. These principles are discussed in Chapters 6 and 7. For now, I would like to suggest that *public choice considerations*⁴⁰ in explaining economic and political behaviour cannot be ignored; i.e. the role of interest groups in shaping regulation on climate change.

A. Why the Political Economy of the EU ETS may be Relevant

The Public Choice approach involves following the interests of different groups of actors in relation to regulation. These groups have traditionally been categorised into voters, politicians, bureaucrats and economic actors.⁴¹ With respect to environmental issues, civil society has been categorised as a separate interest group, as non-governmental collectives have historically had a say in the importance attributed to environmental policies. Writing in 2003, Kirchgassner and Schneider felt that the most compelling public choice finding on incentive-based environmental instruments was that neither bureaucrats nor industrial actors had much of an interest in such instruments.⁴² Rather, they had a path-dependent interest in ‘traditional bureaucratic measures’ in

precisely the objective of the proportionality principle. Iddo Porat and Moshe Cohen-Eliya, ‘Proportionality and the Culture of Justification’ (2011) 59:2 *American Journal of Comparative Law* 463.

³⁹ The distinction between the public choice and public finance approach to environmental federalism has been explained in Michael Faure and Jason Johnston, ‘The Law and Economics of Environmental Federalism: Europe and the United States Compared’ (2008) 27 *Virginia Environmental Law Journal* 205, p. 239.

⁴⁰ Public choice considerations are a narrower version of locating the political; thus the concentration does not encompass the idea of the political as purportedly rational decisions being *in any way contingent* on actors, norms or processes, but focuses on particular and identifiable interests. For a broader view of the political in environmental decisions, see Haas, ‘When Does Power Listen to Truth?’ *supra*.

⁴¹ Gebhard Kirchgassner and Frederick Schneider, ‘On the Political Economy of Environmental Policy’ (2003) 115 *Public Choice* 369, p. 373.

⁴² *Ibid*, pp. 370 – 371.

dealing with environmental issues including air pollution.⁴³ However, this finding is likely untrue for climate regulation in the EU, as well as interest groups outside the EU that are associated with the EU (as is clear from the political debates on the applicability of the EU ETS for the aviation sector) or the challenges to linking other climate change schemes with the EU ETS.

Given that the EU ETS is the primary climate instrument in both Member States and at the EU level that involve economic actors, there are evident public choice concerns that animate incentive-based climate policies. In fact, at around the same time Kirchgassner and Schneider lamented the lack of public choice concerns with regard to incentive-based climate instruments, the EU ETS was coming into its own. The EU ETS Directive was the product of intense negotiations by industrial actors, as is reflected by the difference in the original Commission Green Paper on the EU ETS and the final directive that was released.⁴⁴ The differences reveal political contests with regard to the attribution of abatement responsibility through the inclusion of some sectors, as well with regard to the nature of allocation: the Commission's attempts at introducing auctioning of allowances received heavy opposition from industrial actors, eventually giving way to freely allocated allowances. The argument that free allocation was a transitory policy choice is not true in reality: the effect of over-allocated grandfathered allowances is affecting prices in Phase III.⁴⁵ Analysing the political economy of EU climate policy, Meckling concludes that 'the rise of carbon trading can partially be understood as a strategy of big emitters to prevent the introduction of carbon taxes.'⁴⁶ Baldwin proposes a similar view when he suggests that the EU ETS was 'regulation lite' that found acceptance by emitters.⁴⁷ These two accounts concern themselves with the tussle between economic actors and regulators, and how the EU ETS won

⁴³ Ibid, p. 371.

⁴⁴ Peter Markussen and Gert Tinggard Svendsen, 'Industrial Lobbying and the Political Economy of GHG Trade in the European Union' (2005) 33 *Energy Policy* 245-255.

⁴⁵ Claudia Kettner, 'The EU Emission Trading Scheme: First Evidence on Phase 3' in L. Kreiser et al. (eds.), *Critical Issues in Environmental Taxation, Vol. XV*, Edward Elgar, 2015, p. 63

⁴⁶ Jonas Meckling, *Carbon Coalitions: Business, Climate Politics and the Rise of Emissions Trading* (Cambridge, MA: MIT Press, 2011), p. 48.

⁴⁷ Robert Baldwin, 'Regulation Lite: The rise of emissions trading' (2008) 2 *Regulation and Governance* 193.

out over other alternatives. The tussle between ‘bureaucrats’ and ‘politicians’ should not be ignored, though all but absent from the public choice literature. As we will see in Chapter 6, climate law in the EU is heavily informed by conflicts and complementarities between the Commission and Member States. This is true even in the selection of climate instruments; ‘regulation lite’ was true even for acceptance by Member States, especially as compared to a carbon tax. Consider further Boute’s provocation discussed earlier that perhaps the EU extends its stringent climate policies internationally in order to ensure future energy security. Even if this provocation may be speculative, there is foundation in the suggestion that the EU is establishing itself as the first mover in setting the terms of an international linked carbon market. In both cases, there would be an alignment of ‘bureaucratic’ and ‘political’ interests with regard to climate regulation. Integral to such regulation is the liability of some industrial and commercial actors in contributing to climate change. There is a tendency to concentrate on the flexibility mechanisms found in the Kyoto Protocol and the transactional nature on the EU ETS and ignore the fact that the reason why competing interests are at stake is to alleviate or do away with the onus of liability. To begin with, there is an onus of liability on nation-states at the international level. This liability is both with respect to the payment of penalties for non-compliance⁴⁸ with Kyoto requirements, as well the possibility⁴⁹ of liability-like effects of international reputation.⁵⁰ More subtly – as discussed in more detail in Chapter 6 – the way carbon accounting is inventoried internationally paves the way for a production-based model of liability. Such liability is redistributed at the EU level among Member States, and further among industrial actors.⁵¹ Most of the judicial disputes related to the EU ETS are with regard to the redistribution of liability by Member States to industrial actors. It may be noted that the recent Paris Agreement does not

⁴⁸ http://unfccc.int/kyoto_protocol/compliance/items/3024.php.

⁴⁹ I mention possibility as the payment of penalties appears to be a stronger disincentive, as evidenced by Canada’s withdrawal in 2011 from the Kyoto Protocol to avoid payment of penalties.

⁵⁰ See for instance, Joyeeta Gupta, ‘A History of International Climate Change Policy’ (2010) 1 *Wiley Interdisciplinary Reviews: Climate Change* 636.

⁵¹ Specifically installations and activities within installations as discussed in Chapter 6.

impose liability onto States,⁵² but enhances the role of reputation through enhanced monitoring and reporting requirements.⁵³ The Paris Agreement does not replace the Kyoto Protocol, so the liability mechanism of Kyoto remains. If in the near future, the Kyoto Protocol becomes redundant, the EU may have to make decisions regarding the first stage of distribution of liability rather than the redistribution of international liability. Thus, political and industrial interests clearly have a stake in the life of climate regulation in the EU and Member States.

The role of voters and civil society appears to have had much less visible influence on climate regulation. In the Member States – as *Urgenda* shows – climate change concerns have been mooted by civil society and citizens, but they have not directly affected the nature of regulatory response (such as the type of climate instruments) that may be adopted. Thus, perhaps one reason why there was relative disinterest in responding to the EET survey is that the EU ETS has created a path-dependent analytical interest in industrial actors rather than other influences behind climate regulation. Indeed, accounts in favour of policies such as a PCT or a climate instrument that seeks to involve individuals usually point out that unlike a scheme such as the EU ETS, there is less opportunity for political interests to shape climate policy.⁵⁴ One of the highlights of a regulatory orientation regarding citizen-engagement with climate change is that there appears to be no obvious interests that Member States or organised lobby groups may have; rather, it would be smaller players that shape the information and technologies of individual engagement with climate change that would be interested. I would like to suggest that though this account of public choice being of explanatory value in relation to regulatory choices such as the EU ETS rather than an EET appears to make intuitive sense, it is misplaced. Should the individual be replaced by the phrase ‘end-user’ and end-user engagement be seen in either *a sectoral* way, or

⁵² Hence the view that the Paris Agreement lacks teeth. Clive Spash, ‘This Changes Nothing: The Paris Agreement to ignore reality’ (2016) 13 *Globalizations* 928.

⁵³ Article 13 of the Paris Agreement provides a ‘transparency framework’ to build ‘mutual trust and confidence’ with enhanced reporting requirements. The text is available at: <https://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf>.

⁵⁴ Chamberlin et. al. ‘Reconciling Scientific Reality with Realpolitik’, *supra*.

one that involves private transport,⁵⁵ electricity, food;⁵⁶ essentially collective economic actors; then it is not difficult to see why public choice concerns would be compelling. Further, should aspects of the EET *substitute* goods and services attached to interest groups involved in either the EU ETS or other proposed measures, then political economy aspects seem more compelling. I expand on these ideas below.

The intuition that the role of interest groups may provide negligible analytical insight for an EET may seem reasonable because (i) the traditional conceptualisations of the end-user as an individual or a household or the residential sector implies a disparate group of stakeholders; and (ii) those who have mooted a PCT-like instrument are a small community of scholars whose interests do not directly operate in the same ecosystem as industrial or regulatory interests. Methodologically, given that individuals tend to be irrational, and – as argued in Chapter 4 – behavioural economics provides very little guidance on how individuals may behave like firms, studying the political economy of strategic citizens may not be a fruitful endeavour. What should not be discounted is the public choice implication of this line of reasoning: *if individuals cannot meaningfully engage in strategic behaviour, then there is an incentive for institutions that can engage in strategic behaviour to shift their burdens onto individuals.* In other words, individuals may not be able to compete with firms in rent-seeking behaviour vis-à-vis climate regulation; they would pose a relatively insignificant threat in challenging the distributional impacts of climate policy. Currently, the challenges to the distributional impacts of climate policies in the EU and in Member States have been pursued (though mostly unsuccessfully) by companies like Arcelor who have the wherewithal to litigate their interests. There could well be an incentive for the ‘losers’ in political contests to support individual engagement with climate policy. The losers could either be industrial actors whose interests have been given short-shrift in the current climate policy framework or the regulators who have been unable to pursue their desired agendas. Van Zeben argues

⁵⁵ Federal debates about climate change in the US have been motivated primarily by clashes regarding emissions from automobiles.

⁵⁶ Agriculture is a sector not covered under the EU ETS, but as the Australian and New Zealand experiences demonstrate, agricultural emissions has been a highly politicized issues.

that in Phase III of the EU ETS, regulators in the EU can for the first time pursue a ‘market consolidation’ project since a desirable path-dependence⁵⁷ has now set in, assuaging the contests that raged during ‘market creation’ in Phases I and II.⁵⁸ EU or Member State regulators, or actors covered under the ETS could also be looking to influence an EET scheme, other than the new players that an EET seeks to cover. The existing stakeholders would not have a say if an EET scheme leaves the current policy mix unaffected; however, a possible change in the current framework may well provide an incentive for different stakeholders to influence the nature and content of an EET scheme – or become ‘climate protagonists’.⁵⁹ The nature of the ‘say’ exercised by a current stakeholder would depend on the ability of such stakeholder to shape climate regulation to suit her interests.⁶⁰ Notable in this regard is the shift to auctioning in Phase III that imposes higher costs on industrial actors due to the requirement to purchase allowances. Just as the political economy of the EU ETS was charted in association with other alternatives and instruments such as a carbon tax, so can the political economy of the EET be said to be brought about in association with the EU ETS.

⁵⁷ The phrase ‘desirable path dependence’ may seem like a contradiction, as path-dependence connotes a self-reinforcing decision-making process that leads to suboptimal outcomes. For a discussion, see Edwin Woerdman, ‘Path-dependent Climate Policy: The history and future of emissions trading in Europe’ (2004) 14 *European Environment* 261, p. 263. However, there is no reason to assume that higher costs of reversing previous decisions or a decision making process cannot be set-off against the benefits that are achieved. As far as the EU ETS is concerned, it appears that the costs of market creation are reduced over time while climate targets are being steadily met; thus there appear to be increasing returns to the regulatory process. In relation to a new climate regulation, it is unclear whether the new market-creation and consolidation costs would necessarily complement the EU ETS. Further, for climate change, we are dealing with ‘non-ideal’ situations: unaccounted historical contributions, moderated discounting for future risks, collective action problems all contribute to the reality of institutional action on climate change.

⁵⁸ Josephine van Zeben, *Competence Allocation and Regulatory Functioning: A study of the European Union Emissions Trading Scheme*, ACLE dissertation Series No. 5, pp. 171-200.

⁵⁹ I borrow this phrase from Jacob M. Grumbach, ‘Polluting industries as climate protagonists: cap and trade and the problem of business preferences’ (2015) 17:4 *Business and Politics* 633.

⁶⁰ For an account of how identifying the relationship between interests and reason is the core of behavioral research, see Jon Elster, *Explaining Social Behavior: More nuts and bolts for the social sciences* (Cambridge: Cambridge University Press, 2015).

In addition, there is a normative argument to be made for analysing the relationship between an EET and the EU ETS; and that simply is that the substitution of the EU ETS (or possible extension of the EU ETS into other sectors) with an EET may be undesirable. Van Zeben assesses whether centralisation or decentralisation of the EU ETS involves more compelling public choice considerations such as regulatory capture by industrial groups or environmental interest groups, concluding that the proximity of decentralised regulators tends to favour capture at a ‘local’ level.⁶¹ She recognizes the possibility of capture at the EU level as well with industrial actors using EU regulation to fend off more intrusive national regulation. The possibility of capture, she argues, was well in play at the time of ‘market creation’; this is also supported by the issue of preferring grandfathering over auctioning mentioned above. The overallocation of allowances in Phase I due to industrial support for grandfathering⁶² continues to influence the low prices of allowances; and it will take several years till prices can stabilize.⁶³ However –perhaps a bit counterintuitively for public choice scholars – she commends the path-dependence that has set in the EU ETS, where the competing interests for market creation is giving way to the more equilibrium-achieving interest of ‘market consolidation.’ As to whether there could indeed be a possible substitution effect by an EET is a matter that is discussed in the next chapter with respect to subsidiarity and Double Counting. For now, suffice it to say that much like the public acceptability of a particular scheme cannot be looked at in isolation; the political acceptability of an EET is mediated by political economy concerns arising from the climate policy mix.

B. Political Economy Concerns of Other Potential Climate Measures

⁶¹ Josephine van Zeben, ‘(De)Centralised Law-making in the Revised EU ETS’ (2009) 3 *Carbon and Climate Law Review* 340, pp. 343-345.

⁶² Meckling, *supra*.

⁶³ View taken by Point Carbon’s lead analyst; interview reported in Jillian Ambrose, ‘EU has ‘failed’ to save carbon market from long-term gloom, say analysts’, *The Telegraph*, March 12, 2016.

In the above section, it was argued that the substitution and complementary effects of an EET on interests associated with the EU ETS would provide a window into assessing the political acceptability of an EET without relying on the stated preferences of regulators provided in response to a survey. In this section, I suggest that the interests of stakeholders not currently involved in the EU ETS may also have a bearing on the political acceptability of an EET.

A pre-ETS world was one where the threat of a carbon tax was looming in the air. In response, industrial actors in the UK, financial actors across the EU and the Commission joined hands in bringing about the EU ETS. The absence of a carbon tax could therefore be considered to be the primary ‘opportunity benefit’⁶⁴ of units covered under the EU ETS. The opportunity benefits include the advantages in being a first-mover for a policy that is poised to expand; the advantages of being an early actor in market creation and influencing the rules that future stakeholders would follow is notable over a less flexible policy such as a carbon-tax. A similar way of reasoning may be applied to a potential EET. A stakeholder not currently bearing the brunt of a carbon price may lobby for an EET if the opportunity benefits of avoiding an impending policy mechanism are higher than the costs incurred in an EET. This may explain, for instance, why companies such as Coca-Cola Enterprises fund research on PCT.⁶⁵ It could be because *they seek to avoid the imposition of a carbon price or carbon liability through a different policy mechanism*. Though he uses the phrase ‘hedging strategy’ rather than reaping opportunity benefits, Meckling argues along similar lines when he says that while firms would seek to avoid the reputational costs of anti-regulatory strategies, they would

⁶⁴ Pindyck uses time as a mediator to assess opportunity welfare benefits of a social policy; in relation to adopting a policy at present, he assesses the present value of the additional flow of social cost from continued emissions. Robert Pindyck, ‘Irreversibilities and the Timing of Environmental Policy’ (2000) 22:3 *Resource and Energy Economics* 233-259. I use it in a slightly different sense as benefits enjoyed by stakeholders in avoiding a costlier alternative.

⁶⁵ ‘Personal Carbon Allowances White Paper: How to help consumers makes informed choices’, Report developed by Carbon Trust and Coca Cola Company, 2012. Available at: <https://www.cokecce.com/news-and-events/news/personal-carbon-allowances-helping-consumers-make-informed-choices>.

propose or support regulatory measures that would ‘hedge’ against costlier policy options.⁶⁶

Three developments in the current climate policy environment may lend support to the credibility of the suggestion that firms might promote mitigation measures that regulate individuals: (i) the international consensus in the Paris Agreement to adopt higher targets than those currently assumed, (ii) the inclination of Member States and environmental groups to take climate action in addition to the EU ETS, specifically (iii) proposals by Member States to robustly intervene in the production and sale of fossil-fuel based vehicles that would cover private transport. The Netherlands has for a while been seeking to impose fuel standards; an issue that has been contested in EU courts. Norway – along with some parliamentarians in the Netherlands⁶⁷ – has recently considered banning petrol and diesel based cars (or internal combustion cars) by 2025.⁶⁸ France has followed suit, proposing a ban on petrol and diesel cars by 2040.⁶⁹ Given such developments, there is clearly the possibility of either the expansion of the EU ETS to include newer industrial actors and installations, or the adoption of other more potentially costly measures such as taxes or command-and-control mechanisms such as fuel standards.⁷⁰ The Dutch case with imposing higher fuel standards bore out the fact that internal market considerations might prompt action at an EU level

⁶⁶ Jonas Meckling, ‘Oppose, Support or Hedge? Distributional Effects, Regulatory Pressure and Business Strategy in Environmental Politics’ (2015) 15 *Global Environmental Politics* 19, pp. 23 – 25.

⁶⁷ Janene Pieters, ‘MPS Want only zero emissions cars sold on Dutch market by 2025’, *NLTimes*, March 30, 2016. Available at: <http://www.nltimes.nl/2016/03/30/mps-want-only-zero-emissions-cars-sold-on-dutch-market-by-2025/>.

⁶⁸ David J. Morris, ‘Norway Moves Towards Banning Gas-Burning Cars By 2025’, *Fortune*, June 4, 2016. Available at: <http://fortune.com/2016/06/04/norway-banning-gas-cars-2025/>.

⁶⁹ ‘France Plans to Ban All Diesel and Petrol Cars by 2040’ *New Scientist*, July 7, 2017.

⁷⁰ Concerns have been raised regarding the pass-through of costs to consumers in proposed climate policies in other jurisdictions such as Australia. See for instance Lenore Taylor, ‘Labor proposes two emissions trading schemes costing \$355.9m’, *The Guardian*, April 26, 2016. Restrictions on the pass-through of costs would incentivize the imposition of liability directly onto consumers.

rather than at the national level.⁷¹ In fact, the EU has already put in place fuel standards for passenger vehicles to kick in by 2021.⁷² It clearly may not be long before other potential sectors covered by the EET are brought into regulatory purview. It does stand to reason that those who would be affected by such policy mechanisms may choose an alternative policy mechanism ('horizontal alternative') or lobby for either the EU or Member State whichever affords a more favourable policy (or 'vertical preference') where they would either not have to bear the liability of compliance, or one where re-allocating or passing costs through may be easier.

In the discussion above, I try to chart a political economy of EET, relying on ways of reasoning akin to the Public Choice approach. This approach places reliance on rational actors attempting to promote their interests by influencing the distributive preferences of political decisions. This is not, however, a BLE approach owing to an inclination for strategizing parties looking out for their interests. Would BLE be useful for public choice? The obvious way to do so would be to assess the psychological biases of individual strategisers, be it regulators, economic actors or influential civil society actors. However, in the introductory pages of this chapter, I argued against this approach, pointing out that regulations anchored by reason (or strategic decisions in case of economic actors) are political choices. Individuals may state an opinion and behave in a different way, thus meriting the study of responsiveness as against acceptability. Not so with respect to regulators or experts. With respect to this book, there should be a non-contingent rational 'autonomous justification' for an EET. Having said that, the thrust of this section has been to demonstrate that the absence of political economy concerns cannot be assumed. As indicated, the political economy of EET can be studied and analysed using the tools of public choice theory, where different interest groups strategically seek to become winners as climate protagonists. In such analyses, therefore, it may appear that BLE has no place. I would like to suggest that BLE might have a place, but this is not necessarily an obvious one. It is one that draws on the idea of BLE described in Chapter 3 – *a discipline that is not restricted to some*

⁷¹ For the Commission's initial reaction, see http://europa.eu/rapid/press-release_IP-04-879_en.htm.

⁷² http://ec.europa.eu/clima/policies/transport/vehicles/cars/index_en.htm

forms of psychology, and may look to different social sciences to pursue its interest in analysing actual behaviour without deferring to the axiomatic counterfactual of the rational actor. As suggested in Chapter 3, BLE is not restricted to the tabulation of predictable deviations from rationality that can be tested in a lab. Rather, it involves developing an analytical toolkit drawing on behavioural disciplines to understand behaviour once the rationality assumption has been relaxed. Specifically, while analysing the political economy concerns raised above, I came across an extension of the idea of regulatory capture to the concept of ‘cognitive capture’ of regulators and experts engaged in rational decision-making processes. This concept, to my mind, captures the spirit of BLE in the realm of collective decision-making as it is concerned with the formulation of public reason, and unlike conventional political economy approaches utilized in Sections A and B, does not concentrate on the rational interest-based distortions of public reason. It nonetheless captures the idea of actors being influenced by forces other than rational deliberation that lead to good policy. In the following section, I discuss the idea of cognitive capture, and argue that the word ‘cognitive’ may be misleading owing to its association with cognitive psychology, and suggest instead that the category of ‘discursive capture’ proxies the concept better. Subsequently, I suggest that though evidence of discursive capture cannot be obtained in the same manner that deviations from rational actor models can be gleaned from the experimental method, it is possible to identify properties of this concept in order to avoid overestimating its presence or assuming its absence.

C. ‘Hard-wired’ Biases in Public Reason: BLE and Political Economy of EET

i. Re-thinking Capture

In their edited collection of studies on ‘Preventing Regulatory Capture’, Moss & Carpenter conclude that the scholarship on capture is turning a corner; this turn is towards studying capture as ‘mechanisms of influence’ that define and restrict the public interest.⁷³ This is different from the conventional

⁷³ Daniel Carpenter and David Moss (eds) *Preventing Regulatory Capture: Special Interest Influence and How to Limit it* (Cambridge: CUP, 2013).

concentration on identifying wilful rational acts of some industrial actors in buying out regulators, and ‘bad’ regulators who voluntarily sacrifice the public interest once they see an alignment of their material self-interest with those of certain industries.⁷⁴ Traditionally, regulatory capture involves actual and expected utility gains enjoyed by regulators by way of career opportunities within and outside the regulatory sphere.⁷⁵ Though such gains were initially identified to make an argument in favour of less regulation, industry pressure to reduce regulation is now a widely acknowledged form of capture.⁷⁶ of the defining property of capture is the asymmetry in the influence yielded by interest groups that can be arbitrated for affecting the distribution or redistribution of gains and liability.⁷⁷ This conceptualization does not directly accommodate the possibility that capture might exist *despite* regulators acting in good-faith, and private actors not intentionally seeking to game regulation. Would it be possible to provide a more behaviourally constrained account of capture? This is where discursive capture comes in.

In relation to financial regulation, regulators such as Adair Turner acknowledge the possibility of the ‘mindset’ of associations developed due to

⁷⁴ The coining and elaboration of the concept of regulatory capture is credited to Stigler. George Stigler, ‘The Theory of Economic Regulation’ (1971) *The Bell Journal of Economics and Management Science* 3.

⁷⁵ For a summary, see Luigi Zingales, ‘Preventing Economists’ Capture’ in *Preventing Regulatory Capture, supra*, pp. 124 – 151.

⁷⁶ Posner provocatively asks: given the fact that industries seek to weaken rather than grab hold of regulation, has the concept of ‘capture’ become meaningless? Richard Posner, ‘The Concept of Regulatory Capture: A short, inglorious history’ in *Preventing Regulatory Capture, supra*, pp. 49 - 56. Moss & Carpenter respond that while Posner is right in his observation of dramatic changes in how capture is done, the idea of capture remains as relevant as ever. David Moss and Daniel Carpenter, ‘Conclusion: A focus on evidence and prevention’ in *Preventing Regulatory Capture, Ibid*, p. 456.

⁷⁷ Conventionally, the concentration was on identifying political processes that directed regulatory interest away from the satisfaction of public interest. This – as Engstrom puts it – had the obvious problem of defining public interest. David Engstrom, ‘Corralling Capture’ (2013) 36 *Harvard Journal of Law & Public Policy* 31. This is especially problematic in the case of climate change where the benefits of climate regulation are difficult to ascertain. Jonathan Masur and Eric Posner, ‘Climate Regulation and the Limits of Cost-Benefit Analysis’ (2011) 99 *California Law Review* 1557.

their connection with actors in the financial services industry.⁷⁸ Thus a form of ‘cognitive capture’ arises out of regulators and financiers thinking along the same lines; the language of regulation is shaped by ‘common backgrounds, education, experience and intermingling of powerful players in the policy-making process.’⁷⁹ The substantive content of the interactions between regulators and interest groups is shaped by cultural capital that such actors seek, primarily ‘group identification, status and relationship networks’.⁸⁰ The idea of cognitive capture that scholars articulate and extend relies heavily on a much-cited article by Hanson & Yosifson where they developed the idea of ‘deep capture’: a replacement of Stigler’s idea of regulatory capture based on interacting rational agents with a situated account based on psychologically and socially constrained agents.⁸¹ They argue that we live in a world of deep capture where the universalisation of particular interests is perpetuated even without the moderating force of deliberate strategic interests. The focus is shifted from identifiable and measurable individual incentives to structural and interactional influences behind regulatory cognizance and decision-making that are difficult to identify and measure, especially using the tools available to economists. Given this difficulty of identification and tools of assessing validity and reliability, it is not difficult to see why economists – much like the relevance of psychology prior to Kahneman and Tversky’s systematization of social and cognitive psychology in economic models – may be hesitant to take deep capture or its variants seriously. If everything can be labelled deep capture or cognitive capture, then nothing is. Further, there is no evidence to suggest that all forms of capture are undesirable; it could be argued that it is only when capture either has the potential or can be shown to work against public benefit that it becomes undesirable. Moss & Carpenter suggest that evidence-based diagnosis of capture is crucial, though a presumption against

⁷⁸ Cited in James Kwak, ‘Cultural capture and the Financial Crisis’ in *Preventing Regulatory Capture* pp. 78 – 79.

⁷⁹ Lawrence G. Baxter, ‘Capture in Financial Regulation: Can we channel it toward the common good’ (2011) 21 *Cornell Journal of Law and Public Policy* 175, p. 183

⁸⁰ Kwak, *supra*, p. 79.

⁸¹ Jon Hanson and David Yosifson, ‘The Situation: An Introduction to the Situational Character, Critical Realism, Power Economics, and Deep Capture’ (2003) 152 *University of Pennsylvania Law Review* 129.

over-diagnosis should not preclude taking preventive measures to avoid it. Further, scholars working in political economy are systematically beginning to study variants of deep capture. Allow me to explain with the help of an example from my engagement with CRAs discussed briefly in Chapter 3.

An area where different forms of capture has been sought to be studied is financial regulation. Indeed the informants of capture identified in financial regulation – education, interaction, relationship networks – can be empirically examined; there has been a ‘revolving door’ that has gained a monopoly on transactions over time between expertise about the assessment of risk, industrial actors who finance the generation of expertise, and national and international regulators.⁸² What makes this door problematic is (i) conflict of interest, and (ii) homogeneity among a small group of participants. While *traditional capture* existed over time that created a ‘universal language of risk assessment’ through interactions facilitated by the revolving door; *deep capture* lies in how this language operates on its own without the strategic behaviour of individual lobbyists or regulators or knowledge-brokers. This language pre-empts competition among risk-assessment technologies, or consideration of different understandings of welfare through credibility assessments. Thus, even without evidence of individual instances of strategic behaviour, it is possible to make an argument for a *path-dependent cartelized information space* that shapes how individual regulators approach and understand the idea of credit risk.⁸³ Admittedly, I was able to make this argument because there was a retrospective consensus on the erosion of public benefit by the assessment and management of credit risk that contributed to the recent credit crisis. Once there was evidence on the compromise of public benefit, I was able to buttress the claim of discursive capture with the support of evidence of traditional capture over time and space. While I felt it necessary to identify a form of capture that exists without individual instances of a Stiglerian pursuit of interests, I would not feel confident in making a claim

⁸² Kwak, ‘Cultural capture and the Financial Crisis’, *supra*; Baxter, ‘Capture in Financial Regulation’, *supra*.

⁸³ Mennillo and Roy, ‘Ratings and Regulation’, *supra*, n. Per Miranda Fricker, ‘pure’ power structures condition the credibility attributed to the speaker, and make it difficult for the hearer to actively change the way the speaker is heard. Fricker, *supra*.

of ‘reason’s entanglements with social power⁸⁴ in the absence of a historical revolving door, conflicts of interest and homogeneity among participants. Coming back to Moss & Carpenter’s plea to prevent the reduction of public benefit due to capture, it needs to be asked: can the idea of deep capture or cognitive capture be used analogously in areas which do not benefit from hindsight bias, i.e. where there is no evidence of an erosion of public benefits or welfare? Drawing on Edwin Woerdman’s analysis of institutional path-dependence,⁸⁵ Zeki Sarigil’s concept of habitual path-dependence⁸⁶ and James Kwak’s account of cultural capture,⁸⁷ I suggest it is advisable to invest in the *prevention* of discursive capture.

A clarification before I move on to a discussion of these three accounts: it may appear that I conflate path-dependence and capture. In effect, they might mean the same depending on the breadth of their conceptualisation. However, I would like to note that intuitively capture can lead to path-dependence, but more crucially capture has distribution as its central concern. In traditional regulatory capture – as is true for the entirety of public choice theory – there is an attempt to secure privileged gains or comparative benefits in relation to other agents. This could either be in relation to *ex-ante* distribution or *ex-post* redistribution in relation to any regulation (including deregulation.⁸⁸). In the example on credit risk discussed above, the same applies to deep capture, where some distributive privileges are found in a path-dependent way of assessing and managing credit risk. The avoidance of securing privileged gains has a value in itself due to its potential to distort the achievement of desirable policy outcomes. This idea is different from a desirable path-dependence (as discussed in relation to the EU ETS), as path-dependency does not necessarily contain the potential of distorting the way the reasonableness of a policy has been worked out. Even if we were to narrow down path-dependence to welfare, much like the presumption against

⁸⁴ See the discussion in Section II. B., Chapter 3.

⁸⁵ Woerdman, ‘Path-dependent Climate Policy’, *supra*.

⁸⁶ Zeki Sarigil, ‘Showing the Path to Path-dependence: The habitual path’ (2015) 7 *European Political Science Review* 221.

⁸⁷ Kwak, *supra*.

⁸⁸ Carpenter and Moss, *Preventing Regulatory Capture*, p. 21.

monopolistic behaviour, there is a presumption against capture owing to the collapsing of discourses and approaches into a privileged institutional outlook. This suggestion receives support from accounts on how mitigation of power through distributive mechanisms such as division and separation of powers leads to growth-enhancing institutional innovation.⁸⁹ Distributed power facilitates both bargaining among and experimentation within institutions.⁹⁰ Capture – whatever form it might take – has the potential to pre-empt or dilute the potential for inter-institutional bargaining and disincentivise intra-institutional experimentation.

ii. Preventing Discursive Capture

Inspired by Max Weber's ideal types of social action, Sarigil identifies three types of path-dependence: utilitarian, normative and habitual.⁹¹ The first type concentrates on any form of self-reinforcing dynamic that shapes the achievement of maximizing expected utility or resulting in a socially optimal outcome. The second does not concentrate on any outcome, but a pre-determined belief in certain values or norms that constitute the path. Both these types of path-dependence are characterized by the property of deliberative agency of agents to choose an option that 'is expected to achieve the highest degree of ideational or material benefits or efficiency'. Habitual path-dependence, on the other hand, happens because choice-making happens within a 'behavioural lock-in'⁹² or an internalized disposition, capacity, or power that generates a tendency.⁹³ In Woerdman's analysis of path-dependence in European climate policy, the

⁸⁹ Eric Chaney, 'Separation of Powers and the Medieval Roots of Institutional Divergence between Europe and the Islamic Middle East' in Masahiko Aoki, Timur Kuran and Gerard Roland (eds.) *Institutions and Comparative Economic Development* (New York: Palgrave Macmillan, 2012), pp. 116-127.

⁹⁰ In van Zanden's memorable phrase, a 'wave of institutional gadgets' are brought about when institutional negotiations are in play. Jan Luiten van Zanden, 'The Road to the Industrial Revolution: Hypotheses and conjectures about the medieval origins of the 'European Miracle'' (2008) 3 *Journal of Global History* 337, pp. 351 – 354.

⁹¹ Weber's four types of social action were: instrumentally rational, value rational, affectual (emotional) and traditional (habitual). Sarigil, *supra* n., pp. 227 – 228.

⁹² William Barnes, Myles Gartland and Martin Stack, 'Old Habits Die Hard: Path Dependency and Behavioral Lock-in' (2004) 38 *Journal of Economic Issues* 371.

⁹³ Sarigil, *supra* n.,

analytic core is the possibility of an institutional lock-in that may result in sub-optimal climate policies unless there is an ‘institutional break-out’ usually caused by exogenous changes. The argument goes that there is a tendency of climate regulators to opt for incremental changes to existing environmental policies (given sunk costs, learning effects and increases in institutional scale) thereby avoiding the switching costs to an optimal policy alternative.⁹⁴ The example Woerdman provides is the sub-optimal regulatory choice for credit-trading over permit-trading due to the path-dependence of policy makers in voluntary energy-efficiency standards; the addition of credit trading would add flexibility to the standards that existed and allow perpetuation. It may be noted that Woerdman subscribes to one of the properties of Sarigil’s characterisation of utilitarian path-dependence: the assessment of a socially optimal outcome. Though an institutional break-out requires regulators to respond rationally to internal and external political events, the acquisition and continuation of path-dependence does not seem to involve a maximization of expected utility by regulators. Woerdman’s account, therefore, veers towards a habitual path-dependence of regulatory behaviour, with the qualification that such habits or path-dependence is retrospectively or externally understood against an efficiency criterion.⁹⁵ From the point of view of prevention, pre-emptive costs that may be incurred to avoid higher costs of path-dependent policies are (i) consideration of alternative policies, and (ii) an authoritative external basis for comparison of such policies. The concentration on prevention rather than achievement of efficiency or optimality draws inspiration from Sarigil’s observation that terms such as efficiency assume a pre-determined value – and assumptions about subjective assessments of benefits –that constitutes the path. Kwak provides flesh to this suggestion in his examination of the financial crisis: without the benefit of hindsight, it could still be assumed that price and availability of credit is most efficiently determined through a market of

⁹⁴ Woerdman, ‘Path-dependent Climate Policy’, *supra*, p. 268.

⁹⁵ “Regulation is thought to be dominant when it is (formally adopted and) effectively implemented, while its alternative is not. Superiority is defined in terms of efficiency. By doing so, we avoid any absence of institutional change being called an institutional lock-in, which would make the theory too broad and imprecise.” Woerdman, *ibid*, p. 265.

unregulated financial services.⁹⁶ I do not necessarily⁹⁷ disagree that an ideal conceptualisation of efficiency (as Woerdman does) can put path-dependency retrospectively in perspective. At the same time, given the different ways in which efficiency can be utilized in climate policy,⁹⁸ a preferable alternative would be to ‘debias’ regulators through the requirement to consider alternative policies, and to consider institutional mechanisms to counteract biases.⁹⁹ Woerdman, for instance, observes that in the Netherlands, the Social-Economic Council in its advisory role could not upstage the inclination of several ministries and energy-intensive industries to adopt a permit-trading system.¹⁰⁰ This may not have been the case if a reviewing body such as the Office of the Information and Regulatory Affairs in the United States or the Regulatory Scrutiny Board in the EU could re-direct or compel a reasoned review of the policy disposition to adopt a credit-trading scheme. Rather, there would have been an external incentive for regulators to invest in considering and effecting a ‘break-out’ from path-dependent policies. The possibility of inter-institutional bargaining and intra-institutional experimentation (discussed earlier) appears to have been

⁹⁶ Kwak, *supra* n, p. 74. It may be noted that Sunstein and Thaler in *Nudge* (published prior to the financial crisis) did not find an institutional problem with the lending practices of banks and opposed limits on subprime mortgage lending as that would be too intrusive on peoples’ choices. The preferred approach was disclosure of total fees and interest. For a discussion, see Samuel Freeman, ‘It’s In Your Own Best Interest’, *New York Review of Books*, October 24, 2013.

⁹⁷ I am yet to be convinced of the value of efficiency as an organising principle of regulatory decisions. Both Kaldor-Hicks efficiency and Pareto efficiency are difficult to accept after Coase identified the inevitable existence of positive transaction costs, and appealed for a comparative institutional analysis as the preferred way of understanding costs. This position was clarified by Coase on multiple occasions but most succinctly demonstrated by Calabresi. Guido Calabresi, ‘The Pointlessness of Pareto: Carrying Coase further’ (1991) 100 *Yale Law Journal* 1211.

⁹⁸ We will see in Chapter 6 the difficulties in defining efficiency, whereby the simpler alternative of cost-effectiveness is usually preferred. The identification and quantification of optimality entails costs that lead to the discounting or even avoidance of several costs and benefits. This is true for environmental policy in general and climate change in particular. For environmental law regulation in general, see Amy Sinden, ‘Cost-Benefit Analysis, Ben Franklin and the Supreme Court’ (2014) 4 *UC Irvine Law Review* 1175. For climate policy in particular, see Masur and Posner, ‘Climate Regulation and the Limits of Cost-Benefit Analysis’, *supra*.

⁹⁹ *Ibid*, Kwak relies on Sunstein and Jolls for the idea of debiasing.

¹⁰⁰ Woerdman, ‘Path-dependent Climate Policy’, *supra*, p. 268.

pre-empted. The suggestions Moss & Carpenter offer after a review of multiple accounts of avoiding capture are all in relation to institutional mechanisms that consider alternatives and review existing regulatory inclinations; the suggestions would be familiar to scholars of administrative law: diverse forms of expertise, judicial review, a body to conduct retrospective regulatory oversight.¹⁰¹ While investment in such alternatives is supported from the perspective of fair procedure, such investment would be of similar value to avoid discursive capture. As regulators and experts alike are amenable to discursive capture the way it has been conceptualised in this section, I try something unconventional below. I try to apply the idea of preventing discursive capture to my own thinking on climate regulation.

iii. Preventing Discursive Capture in EET: A Reflective Note on Negotiating Efficiency and Fairness

While writing this book, I felt that several members of different departments at the law faculty at the University of Groningen would talk past each other on European Law or consumer law or environmental law, and rare attempts at compatibility would be made. This is not necessarily a problem; as the discussion on psychological and sociological approaches to climate regulation in Chapter 3 demonstrated, different approaches could well have independent value without being discursively compatible.¹⁰² In the legal academia, there is often a divide among scholars who value deontology and hermeneutic approaches (scholars who normally work on human rights, citizenship, continental philosophy) on one hand and others who value consequentialism and scientific approaches (scholars who normally work on finance, competition law, economic analysis) on the other. To me, it would be unwise to situate either climate regulation or BLE in either of these camps as it deals with both deontological and consequential questions. It would be useful to avoid missing out on knowledge because of ‘credibility deficit’ or ‘credibility excess’ attributed to some forms of scholarship.¹⁰³ It may appear

¹⁰¹ Moss and Carpenter, ‘Conclusion’, *supra*, pp. 451 – 465.

¹⁰² See the debate between Elisabeth Shove and Lorraine Whitmarsh discussed in Chapter 3, Section III.A.

¹⁰³ See the discussion on Testimony in Chapter 3, Section III B.

that L&E is found in the consequentialist camp; this is so if we were to follow a Beckerian or Posnerian way of analysing the world. However, deontological scholars such as Ronald Dworkin¹⁰⁴ made equally arresting contributions to L&E. Subscribing exclusively to either of these ways of analysing regulation may well be a manifestation of discursive path dependence. Should epistemic choices be completely intentional or after a rational assessment of costs and benefits, then there would be little scope for the applicability of BLE. I suspect, however, that the influence of training, networks, incentive schemes, job security, desire to belong to a community has the potential to create a form of naturalised discursive capture that may not be intended or beneficial for contribution to knowledge or informing regulatory choices. How do we prevent discursive capture? I believe Calabresi can show us the way. If the reader would indulge me for the remainder of this chapter, I will try to demonstrate how, and in the bargain develop a conceptualisation that I would use in subsequent chapters.

The survey conducted and reported in Section III yielded mixed and in some cases contradictory responses. In brief, it seemed to me that responses pointing to unfair attributes of the EET could not be reconciled with ferreting out administrative and implementation costs. While designing the survey, I felt I should give equal importance to both *efficiency* and *fairness*. While efficiency considerations moderated most of the questions asked (governance,

¹⁰⁴ Despite popular acceptance of Dworkin's deontological orientation, there is some confusion as to how Dworkin's analytical outlook may be categorised. This is due to his claim that his 'embedded approach' to legal reasoning seeks to look out for desirable consequences: "It [the embedded approach] aims at a structure of law . . .that is egalitarianAnd it is consequential in detail: Each interpretive legal argument is aimed to secure a state of affairs that is superior, according to principles embedded in our practice." Ronald Dworkin, 'In Praise of Theory' (1997) 29 *Arizona State Law Journal* 353, p. 361. However, as Kamm clarifies, the import of this statement means that there are no deontological characteristics of legal reasoning that obstruct legal decisions that 'best express deontological principles embedded in practice'. This is made clear in Dworkin's disagreement with Posner where Dworkin does not critique Posner's outlook towards consequentialism but the deontological values that Posnerian efficiency is geared towards. Dworkin claims that the maximisation of aggregate welfare is the deontological principle implicit in Posnerian efficiency at the cost of fairness and equality. Frances Kamm, 'Theory and Analogy in Law' (1997) 29 *Arizona State Law Journal* 405, p. 410.

EU ETS concerns, system design, and questions in the fairness section such as buying and selling of allowances), fairness concerns crop up regularly in analyses of schemes akin to the EET (see Chapter 2); this motivated me to have a separate section on fairness. The difficulty with the terms efficiency and fairness is that they are often incompatible, primarily because the former is the outcome aimed at by economists and the latter the central point of inquiry by many philosophers and legal scholars. This is not to say that economists do not study fairness and philosophers or legal scholars do not study efficiency, but that their training lends themselves to opt for one of these two concerns as the central unit of analysis. This is evident in the professed incompatibility of the positions taken by economists such as Richard Posner and philosophers such as Jules Coleman in ferreting out the discipline of L&E.¹⁰⁵ While reconciliation seemed difficult, what is noteworthy is that scholars inclined towards economic analysis and philosophical analysis provided an authoritative review of each other, thus allowing the possibility of L&E to avoid discursive capture. Having said that, it seems necessary to identify with a particular discipline in order to make a rigorous or scientific contribution. This was my way of thinking while conducting my literature review in Chapter 2 and while designing the survey described in this chapter. However, this is not the only way to conduct analyses. The possibility of reconciling disciplines – and their discursive orientation – was demonstrated by Calabresi where he engaged in ‘middle-theorising’¹⁰⁶ and for that was attacked by both philosophers¹⁰⁷ and economists.¹⁰⁸ Per Calabresi, the primary idea that lies at the core of both efficiency and fairness (or ‘justice’ as he put it) is *distribution*; it is a concentration on distribution that makes both justice and efficiency

¹⁰⁵ Most of these debates are captured in the 1980 ‘Symposium on Efficiency as a Legal Concern’ published in the Hofstra Law Review. Available at: <http://scholarlycommons.law.hofstra.edu/hlr/vol8/iss3/>.

¹⁰⁶ For a review, see James R. Hackney Jr., ‘Guido Calabresi and the Construction of American Legal Theory’ (2014) 77:2 *Law and Contemporary Problems* 45; Keith N. Hylton, ‘Calabresi and the Intellectual History of Law and Economics’ (2005) 64 *Maryland Law Review* 85.

¹⁰⁷ Dworkin disliked Calabresi’s interest in efficiency. Ronald Dworkin, ‘Is Wealth a Value?’ (1980) 9 *Journal of Legal Studies* 191, p. 205.

¹⁰⁸ Posner disliked Calabresi’s interest in justice. Richard Posner, ‘Guido Calabresi’s ‘The Costs of Accidents’: A Reassessment’ (2005) 64 *Maryland Law Review* 12, p. 15.

compatible. Drawing on this line of thinking, I would like to suggest that a focus on distribution is both reflective of the real world of climate regulation as well as the way towards reconciling some of the key tensions in an EET scheme. Importantly, the Calabresian way avoids being invested in a particular discourse that creates categories of how the world is viewed and policies are made, but provides a way to negotiate discourses traditionally thought to be found in either the science of economics or the rigour of philosophy. A strong discursive preference – identified by a cultural belonging to a community that is trained in a similar way of thinking¹⁰⁹ or that is unwittingly shaped by the same professional incentives¹¹⁰ – has the potential to partition regulatory discourse, or one that is inclined to view climate policy as a justice-based issue or one that opts for a narrow language of efficiency.¹¹¹

In Section IV.A and IV.B, the role of interest groups in influencing the distribution of climate liability was discussed. Calabresi's interpretation of *The Problem of Social Cost* was that “where a market does not exist to internalize costs, the assignment of liability will have the effect of creating a market or market-like interconnections between classes of agents that will cause relevant costs etc. to be reflected in the prices faced by all agents.”¹¹² This is precisely how the flexibility mechanisms came about in the Kyoto Protocol through Common but Differentiated Responsibilities, the Burden Sharing Decision in the EU and finally the EU ETS through the Emissions Trading Directive. As to how this has a hold on climate policy in Member States as well will be discussed in Chapter 6, but for now, it may

¹⁰⁹ Drawing on Douglas Vick, a discursive discipline is characterised by two primary properties: it is a body of knowledge designed around ‘internal protocols and assumptions, characteristic behaviours and self-sustaining values’, and it is a social community whose members share ‘personal experiences, values and aesthetic judgements’. Douglas Vick, ‘Interdisciplinarity and the Discipline of Law’ (2004) 31 *Journal of Law and Society* 163, p. 166.

¹¹⁰ The attachment to a particular scientific or social-scientific discipline to understand law is susceptible to disciplinary fashions and politics that shape the manner and language of inquiry. See Suryapratim Roy, ‘Privileging (some forms of) Interdisciplinarity and Interpretation: Methods in Comparative Law’ (2014) 12 *International Journal of Constitutional Law* 786.

¹¹¹ Kysar provides nuance on when ‘different truths’ may be spoken to the same powers in relation to climate regulation, and when that may prove to be difficult owing to incontestable regulatory views on what efficiency entails. See Kysar, ‘Politics by Other Meanings’, *supra*, p. 68.

¹¹² This reconstruction is Medema's. Medema, ‘Juris Prudence’, *supra*, p. 78.

be noted that the ‘cap’ in the ‘cap-and-trade’ scheme that characterizes the EU ETS is a result of distributive choices, enforced by placing liability on installations in certain sectors for payment of large penalties in the event of non-compliance, in addition to making reparations for unpriced emissions. What distinguishes the EU ETS from a carbon tax is the creation of a market that would arrive at a price of carbon, and what distinguishes the permit-trading preference of the EU ETS from a credit-trading mechanism is the fixed cap decided on distributive preferences enforced by a ‘nuclear option’ of high penalties. To clarify, the penalties required under the EU ETS do not require an estimation of the social cost of carbon,¹¹³ but operate more as exemplary damages that need to be paid for non-compliance by way of strict liability. The operation of strict liability is evident from a couple of cases where the CJEU effectively ruled that in the absence of *force majeure*, there is no room for firms to negotiate either the penalty or the reparations requirement.¹¹⁴ While the price of one tonne of carbon dioxide is (at the time of writing this chapter) lower than ten euros, the penalty for non-compliance for Phase III is one-hundred euros for one ton of extra emissions, in addition to a carry-over of the shortfall to the following year. The distributive choices that entail the setting of a cap (even the more flexible ‘intensity caps’ in some cap-and-trade systems such as the Chinese national ETS¹¹⁵), and implementing such caps such as the threat of penalty or reparations entails the assignment of liability. It is crucial to note that there are no great assessment costs incurred in deciding on the penalty; ingeniously, the price of carbon is left to the market, where market interactions take place after the assignment of liability that implements a

¹¹³ As Calabresi has recently clarified, contrary to the perception of several economists, a liability instrument need not mimic the market, or arrive at a price assessment as if the market functioned properly. Guido Calabresi, ‘A Broader View of the Cathedral: The significance of the liability rule, correcting a misapprehension’ (2014) 77 *Law and Contemporary Problems* 1.

¹¹⁴ C-203/12 *Billerud Karlsborg Aktiebolag v Naturvårdsverket* [2012] OJ C184; Case C-580/14 *Sandra Bitter v Bundesrepublik Deutschland* [2015] ECLI:EU:C:2015:835.

¹¹⁵ See Yingying Zeng, Stefan E. Weishaar and Oscar Couwenberg, ‘Absolute v. Intensity-based Caps for Carbon Emissions Target Setting: An obstacle to linking the EU ETS to the Chinese National ETS?’ *MIT Center for Energy and Environmental Policy Research Working Paper* 2016-008.

cap. Thus, the valuation of carbon is determined by the market, for which the recognition of property rights in the permits is imperative. Unlike the EU ETS characterised by a fixed enforceable cap, voluntary carbon trading practices or credit trading systems (such as the trading of Kyoto credits by countries to who responsibility for curbing emissions is not distributed) do not have a liability component. What it has instead is a market mechanism facilitated by regulation; the market entails recognition of the property rights found in the credits, as well as valuation of carbon¹¹⁶ through the functioning of the market. Thus, the primary alternatives to climate policy can be categorised as:

Type of Instrument	Categorisation of Instrument
Carbon tax	Liability instrument
Credit-trading	Property instrument
Cap-and-trade	Instrument based on assignment of liability + Valuation of carbon through bargaining (enforced by property rights)

I realise that the characterization of cap-and-trade¹¹⁷ above is at odds with conventional views of the EU ETS that characterise it as an exclusively

¹¹⁶ Admittedly, determining a baseline in credit trading mechanism above which credits can be earned is a controversial non-market component in the valuation of carbon. However, the valuation of the property right found in a credit is determined by market forces.

¹¹⁷ The combination of assignment of liability and a market mechanism may appear unusual. However, prominent L&E scholars have analysed and advocated a 'liability rule with a bargaining component'. See Louis Kaplow and Steven Shavell, 'Property Rules Versus Liability Rules: An economic analysis' (1996) 109 *Harvard Law Review* 713. Kaplow and Shavell advocate a liability rule with a bargaining component over a property rule to avoid the costs of strategic behaviour in a property rule. I do not suggest that the EU ETS is based on a strict liability rule in the Calabresian sense. I will argue in Chapter 7 that there is a constructive

property rights instrument. Given the importance of distributive concerns to the allocation of allowances in the EU ETS (starting with Kyoto and ending with National Allocation Plans in Phases I & II, and allocation to certain installations in certain sectors in Phase III) and the centrality of penalties in market-making, I beg to differ with this conventional discourse.¹¹⁸ Undoubtedly, an allowance amounts to a license that gives its purchaser a limited right to emit, and this right can be enforced in a court of law.¹¹⁹ However such license essentially implies that for those installations that are included in the EU ETS and required to pay a penalty for not meeting a cap, there is no inalienable entitlement to pollute. Currently, anyone willing to bear the registration costs can be registered in the EU ETS registry and participate in the market for emissions, but it is not mandatory for them to do so, i.e. there is no regulated liability attached to their participation.

entitlement of all citizens to be free of climate risks against which liability is assigned. See also Ian Ayres and Eric Talley, 'Solomonic Bargaining: Dividing a legal entitlement to facilitate Coasean trade' (1995) 104 *Yale Law Journal* 1027.

¹¹⁸ There is yet another argument to be made for the centrality of liability to the EU ETS. In an exclusively property rights framework, the property rights are clearly defined. This has never been the case with any permit trading mechanism. As Driesen puts it, 'Unfortunately, typologies of property rights do not explain who owns what under an emissions trading scheme.' David M. Driesen, 'What's Property Got to Do With It?' (2003) 30 *Ecology Law Quarterly* 1003, p. 1011. In the Sulphur-dioxide trading programme in the United States that served as motivation for the EU ETS, Section 403f of the US Clean Air Act, 1970 clearly specified: "An allowance under this title is a limited authorization to emit sulfur dioxide.... Such allowance does not constitute a property right." Available at: <https://www.law.cornell.edu/uscode/text/42/7651b>. Notwithstanding the absence of formal property rights of the underlying asset, an EU ETS allowance as with a sulphur dioxide allowance, the property of transferability clearly exists, as is evident from derivate transactions in secondary markets. Taking account of this complexity, Button characterizes allowances in permit-trading frameworks as currencies rather than commodities. Jillian Button, 'Carbon: Commodity or Currency? The Case for an International Carbon Market Based on the Currency Model' (2008) 32 *Harvard Environmental Law Review* 57.

¹¹⁹ There are disputes, however, on how this right is characterized, and what duties may be conferred on others for recognition. This became evident in a case where legal categorizations of an allowance across jurisdictions had to be analysed; the issue was whether ownership of an allowance bestows corresponding duties on parties in different jurisdictions in the case of bonafide purchases of stolen allowances. *Armstrong DL GmbH v Winnington Networks Ltd.* [2012] EWHC 10.

Other than the above descriptive account of the centrality of distributive preferences in climate regulation, there could be a normative purpose of thinking about distribution for an EET. As we have seen from the survey, there is preference for the EET to be a mandatory mechanism without an opt-out clause, which means it would have to be enforced in a manner similar to the EU ETS. However, should this mandatory mechanism be enforced by a penalty if it is perceived to be unfair? I admit that the framing of questions in the survey was conceptually convoluted. The ‘fairness’ questions may have received more considered responses were they represented as they are: questions of distribution. Fairness often represents an incommensurable value preference and is often characterized by the idea that ‘each person should bear the cost of his or her activities’.¹²⁰ This is more in line with the polluter-pays principle. To a great extent, both Coase and Calabresi tried to find a way out of conflicting views about causality found in the polluter-pays principle. Rather than invest in causality, Calabresi’s preferred approach to ‘accident-like’ situations is ‘when in doubt, allocate the cost to the party who can most cheaply enter into transactions to rectify the error.’¹²¹ With regard to climate regulation, a causal responsibility-based polluter-pays principle would inevitably privilege one point of view in relation to liability for climate action across time and space;¹²² this is why fairness justifications could collapse into ‘intuitions about what is just.’¹²³ These intuitions – much like preferred conceptions of efficiency – have the potential to assume a privileged way of defining fairness. To clarify, per Calabresi, distribution is not the same as ‘fair distribution of costs’; there is no normative pre-determined fairness qualifier. Rather, distribution is descriptively a state of affairs in the world that has bearing on the effects of an event.

¹²⁰ Stephen G. Giles, ‘Causation and Responsibility after Coase, Calabresi and Coleman’ (1996) 16 *Quinnipac Law Review* 255, p. 277.

¹²¹ Guido Calabresi, ‘Does the Fault System Optimally Control Primary Accident Costs?’ (1968) 33 *Law & Contemporary Problems* 429, p. 447.

¹²² See discussion in Chapter 1, Section I, Part C on ‘Regulating Climate Behaviour’.

¹²³ Guido Calabresi, ‘First Party, Third Party, and Product Liability Systems: Can Economic Analysis of Law Tell Us Anything About Them?’ (1984) 69 *Iowa Law Review* 833, p. 833.

This informs regulatory assignments of entitlements and liability – or regulatory distribution – to shape desirable outcomes. Nor is efficiency an ideal or ‘as if’ yardstick, but one which aims at identifying the ‘cheapest’ of available alternatives taking into account distributive realities; again, there is no pre-determined optimal model of efficiency.¹²⁴ It should come as no surprise that BLE scholarship that questions the actual effects of normative interventions and the taken-for-granted axioms of economics is more in tune with Calabresi’s interpretation¹²⁵ rather than Stiglerian interpretations of Coase.¹²⁶

If we were to shift the discussion to distribution rather than fairness or efficiency, then we could see an EET as one where the liability for emissions is likely to be distributed to individuals or households. This distribution could amount to redistribution if it serves to substitute existing or potential liability of other participants in climate regulation, as discussed earlier in this chapter. This brings us to two questions: what is the current regulatory mechanism within which issues of distribution and redistribution can be conceptualised? Secondly: is distribution of liability to individuals or households necessary and suitable, keeping in the mind the requirement to achieve the highest amount of emissions reduction at the lowest possible cost? To answer these questions, let us turn to climate regulation in the European legal order and whether an EET would satisfy the proportionality test.

¹²⁴ Calabresi argues that Kaldor-Hicks efficiency is possible in a world of zero transaction costs, but not otherwise. He further argues that the Paretian criterion cannot provide any real guidance without taking into account distributive concerns; if there were no distributive concerns, then Pareto superior moves would have already happened. Calabresi, ‘The Pointlessness of Pareto’, *supra*, pp. 1221 – 1227.

¹²⁵ There are two independent accounts to my knowledge of how Calabresi had foreseen BLE. Michael Faure, ‘Calabresi and Behavioural Tort Law and Economics’ (2008) 1 *Erasmus Law Review* 75; Hylton, ‘Calabresi and the Intellectual History of Law and Economics’, *supra*, pp. 100 – 101.

¹²⁶ Given the psychological evidence supporting loss aversion, Sunstein argues that “the [Coase] theorem is wrong because the allocation of the legal entitlement may well matter in the sense that those who are initially allocated an entitlement are likely to value it more than those without the legal entitlement.” Cass Sunstein ‘Behavioral Analysis of Law’ (1997) 64 *University of Chicago Law Review* 1175, p. 1179.

V. CONCLUSION

This chapter started out by observing that there is a clash of two intuitions about the attractiveness of an EET: the first is to listen to what regulators have to say about it and gauge its feasibility. The second is to consider the opinions of regulators as problematic, given that regulators are people, and therefore they must be subject to the same biases as individuals. However, I argued that unlike individuals, there isn't a disconnect between 'stated preferences' and choices of regulators in legal systems that value justification; what they say is what they do. Their reasoning serves as anchors for policies. Accordingly, I suggested that surveying regulators about an EET would fill a much-needed gap in understanding the political acceptability of an EET. To this end, I conducted a pilot survey, and subsequently a survey. In the survey conducted, I selected 'experts' as a control group to keep a check on the political preferences of regulators. Unfortunately, due to the low response rate, no robust conclusions could be drawn from the survey. Nonetheless, the responses to particulars were used to appreciate different views on of the components of an EET.

The second part of the chapter concentrated on the political economy of an EET. Self-interest based behaviour of political agents in L&E is the concern of scholars working on public choice and political economy, where the interest is on how incentives influence the strategic behaviour of different agents. Schemes similar to an EET (such as the PCT) sorely miss such an account; this could be because climate regulation involving individuals and households do not conventionally bring into play public choice concerns.¹²⁷ I argue that even if individuals and households may not constitute a compelling lobby group, interests of agents invested in the EU ETS, as well as agents seeking to avoid regulation in relation to sectors not covered by the EU ETS, would try to shape the contours of an EET. To the extent the EET serves as

¹²⁷ The public choice tradition focuses on organised interests rather than vague demands by disparate groups or individuals; even in the 'shadow interest group' theory where a general public demand influences regulation when an event occurs assumes that the shadow group would exhibit the characteristics of a general interest group. See Faure and Johnston, *supra*, p. 39. See also the discussion on the influence of relevant interest groups on environmental policy in Kirchgassner and Schneider, *supra*.

a substitute to the EU ETS and for possible non-EU ETS regulation, agents may prefer an EET if it provides an ‘opportunity benefit’. This suggests that there may well be a disconnect between the stated preferences and political choices made by regulators. With respect to method, there appears to be limited utility for BLE as the concentration is on how strategic interests seek to attain distributional gains.

Finally, while I disagreed with scholars who assume equivalence of individual cognition and collective or regulatory cognition, there is still a (much-needed) way of keeping the spirit of BLE alive in analysing collective decisions. This spirit can be found in the possibility of discursive capture: it is possible that institutions and regulators assume a privileged discourse in analysis and decision-making without strategically doing so owing to embedded social and cultural forces. I suggest that such discursive capture cannot be assumed, but needs to be established. Having said that, I argue that it would be wise to prevent such capture by allowing competing authorities to keep a check on each other. Calabresi took pains to avoid the capture of L&E by non-negotiable views on ‘fairness’ and ‘efficiency’ by concentrating on the ‘middle-theorising’ of distribution. I adopt this view and argue that distribution reveals the analytical basis of the EU ETS: a combination of assignment of liability and adoption of a market mechanism to discover the price of carbon. This combination is crucial to appreciating the regulatory architecture of a possible EET scheme as we shall see in the two chapters that follow.



6

EU CLIMATE REGULATION, SUBSIDIARITY AND EET*

6

Proposals akin to an EET have been mostly silent on European law. Legal scholarship on climate change in the EU has centred primarily on tussles between the EU and Member States, and between industries and regulators. On the other hand, proposals on Personal Carbon Allowances and Tradeable Energy Quotas were developed by non-legal scholars who were making a case for the engagement of individuals in responding to climate change. The PCT Report betrays that the House of Lords did not address the influence of European law on a national climate measure. The only two articles that considered interactions with the EU legal order are Tina Fawcett's article on the interest of PCT in the UK rather than other jurisdictions,¹ and Arnaud Brohe's analysis of the interaction of a PCT with the EU ETS.² To summarise their positions briefly, Fawcett opines that the PCT should initially be introduced at the national level owing to factors such as particulars of energy consumption and wealth distribution. Brohe looks at possible economic interactions with

* Some of the arguments mooted in this chapter can be found in Suryapratim Roy, 'Distributive Choices in *Urgenda* and EU Climate Law' in Catherine Baner and Martha Roggenkamp eds. *European Energy Law Report XI* (forthcoming, 2017).

¹ Fawcett, 'Personal Carbon Trading in Different National Contexts', *supra*.

² Brohe, 'Personal Carbon Trading in the context of the EU Emissions Trading Scheme', *supra*.

the EU ETS, and insightfully points to overlaps that may not allow the PCT to generate any meaningful environmental benefit given the problems of Double Regulation and Double Counting. Further, unlike Fawcett, Brohe points to the inevitability of the EU coming into the picture for non-stationary actors such as individuals.³ Brohe's insights could be substantially complemented by analyses of the interaction of a PCT scheme with European law. With this chapter I seek to fill this gap. Complementary to the analysis on the European political economy of an EET conducted in Chapter 5, is the discussion I'm about to embark on with respect to European regulation.

I. THE EU CLIMATE REGULATION COMPLEX

In the Introduction to this book, it was suggested that voluntary action, incentive-based interventions as well as internalised motivations are inevitably situated in an institutional context. This inevitability requires us to assess and design regulation in a holistic sense, entailing the identification of parties that need to be regulated, the assignment of property rights to parties engaged in transactions, as well as to identify and mitigate transaction costs for these parties so that markets can work. Regulation may also well include complementary constraining mechanisms to ensure the achievement of desirable social outcomes. Given that regulation does not take place in vacuum, there are inevitably redistributive effects. The absence of a particular regulation entails retaining the status quo which cannot be assumed to be free of distributive concerns, be it exposure to climate risk, or the differential burdens placed in responding to such risks.

A. The Constraining and Facilitative Role of EU Regulation

The first aspect of the inter-relationship between EU and Member State regulation is one of *constraint*: no national climate policy is independent of the EU. Some scholars argue that national climate measures have no independence at all; they are inevitably circumscribed both by primary and secondary European Law, namely Articles 291 and 292 of the Treaty of the

³ Ibid, p. 473.

Functioning of the European Union (TFEU) and the EU ETS Directive.⁴ Others are of the opinion that there is leeway, especially given Article 293 TFEU that allows Member States to adopt more stringent measures,⁵ and the Effort Sharing Decision (ESD) that allows Member States to adopt measures not covered by the EU ETS. As we shall see, Member States do not have unfettered discretion with regard to these instruments and provisions.

The second aspect is that an understanding of European regulation, rather than a narrower focus on positive law, brings forth considerations regarding an appropriate level of governing such a scheme. This reason is one of *facilitation*. The facilitative role of regulation would be evident to L&E scholars who consider the focus of regulation to be the reduction of transaction costs. Even within a realistic situation where transaction costs cannot be eliminated, regulation can serve to assist with guiding the behaviour of different stakeholders. In fact the entire enterprise of nudge and nudge-like devices is to facilitate the making of good choices. As discussed in Chapter 4, the role of incentives may be useful for purposes other than facilitating efficient bargaining. If we look at European regulation, both constraint and facilitation are pursued simultaneously. Take for instance the harmonising role of the Energy Labelling Directive.⁶ The Directive constrains the freedom of Member States to do what they like in relation to energy efficiency; Member States are *prohibited* to deviate from the requirements laid down in piecemeal EU regulation on specific products giving effect to the Directive.⁷ Further Member States are *mandated to allocate* such requirements to suppliers and

⁴ Ted Thurlings, 'The Dutch Climate Case – Some Legal Considerations', available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2696343.

⁵ Lorenzo Squintani, Marijn Holwerda and Kars de Graaf, 'Regulating greenhouse gas emissions from EU ETS installations: what room is left for the Member States' in Marjan Peeters, and Mark Stallworthy (eds.) *Climate Law in EU Member States: Towards National Legislation for Climate Protection* (Cheltenham: Edward Elgar, 2012), pp. 67 – 88.

⁶ Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products OJ L 153, 18.6.20.

⁷ Article 3 (1) (b) states: 'with respect to products covered by this Directive, the display of other labels, marks, symbols or inscriptions which do not comply with the requirements of this Directive and of the relevant delegated acts is prohibited.'

dealers to ensure that labels are designed and displayed in a certain way to ensure that the final consumer is adequately informed to make appropriate consumption choices. Facilitation occurs because the information costs of appropriate product labelling, as well as how Member States may deal with suppliers and dealers are specified. The Directive also aspires to play a distributive role that is facilitative for small and medium-sized entrepreneurs.⁸ With respect to consumers, their choices are at the same time facilitated through aiding choices as well as constrained in comparison to pre-regulation availability of products. It must be noted, however, there is no liability on consumers to become energy efficient under the Directive; in this regard, the Directive does not mandate a distribution of responsibility to consumers. This brings us to a discussion on distribution and allocation.

B. The Distributive Role of EU Regulation

Though the discussion above was framed in terms of constraint and facilitation, the terms ‘allocation’ and ‘distribution’ were used without explanation. I will seek to articulate what I mean by such terms in this section, as they are of crucial importance to not only this chapter and the ones to follow, but the entirety of the book.

In the literature review conducted in Chapter 2 I used the terms allocation and distribution interchangeably. In Chapter 5 I demonstrated that the Public Choice approach to climate policy is essentially a study of conflicts over the distribution and redistribution of costs (such as those that liability brings) and benefits (such as the ‘opportunity benefits’ of avoiding an alternative policy). Concerns regarding distribution are traditionally understood as being confined to the realm of the political, or issues that need to be dealt with prior to and despite reason-based inquiries. In relation to cost-benefit analyses, Adler and Posner point out that “the purpose of CBA, as typically understood, is to separate out the distributional issue and isolate the efficiency issue, so that

⁸ Recital 25 states: ‘When Member States implement the provisions of this Directive, they should endeavour to refrain from adopting measures that could impose unnecessarily bureaucratic and unwieldy obligations on the market participants concerned, in particular small and medium sized enterprises.’

the agency will evaluate projects solely on the basis of their efficiency.⁹ Thus conceptualised, when parties bear differential costs and benefits in relation to regulation, such costs and benefits are *allocated* in pursuit of efficiency. In relation to climate regulation, therefore, a desirable division and separation of powers¹⁰ would thus be analysed from the point of view of allocation; changing responsibilities and burdens may amount to a transfer of wealth. Such allocation or transfer should theoretically not amount to redistribution, as that would then fall outside the purview of a rational assessment of a policy mechanism. I will show below that delineating allocative concerns from distributive concerns in relation to climate instruments is not feasible. Being mindful of the inevitability of distributive choices with respect to a climate instrument would, in turn, point towards a comparatively efficient choice.

i. Distributive Choices in Climate Regulation

The Hague District Court in *Urgenda*¹¹ required the government of Netherlands to adopt higher climate targets. To do so, it made two distributive choices. The first is that the Court endorsed the IPCC Fourth Assessment Report finding that a reduction of 25 per cent by 2020 and 40 per cent by 2030 needs to be achieved by Annex 1 countries.¹² It would be difficult to characterise this target as scientific as the target for ‘Annex 1’ countries is a distributive choice; the very idea of distinguishing among countries for a commons problem finds its roots in the political negotiations conducted under the aegis of the UNFCCC and the normative idea of Common but Differentiated Responsibility. The second distributive choice the Court made was to require the Netherlands to fulfil this target on its own, irrespective of the achievement of the EU as a collective or Annex 1 countries as a collective.¹³ The government argued that the Court made a redistributive choice by mandating the allocation of the

⁹ Matthew Adler and Eric Posner, ‘Re-thinking Cost-Benefit Analysis’ (1999) 109 *Yale Law Journal* 165, p. 186.

¹⁰ For a discussion on the concerns of division of powers and separation of powers to regulation, see Chapter 3, Section II.

¹¹ *Urgenda*, supra, n. 143, Chapter 3.

¹² *Urgenda*, para 2.15.

¹³ See Roy and Woerdman, ‘Situating *Urgenda*’, supra, p.

State's resources away from other programmes such as climate adaptation.¹⁴ This interpretation is a hasty one, as a claim of redistribution would require an assessment of how costly an instrument choice is, how it interacts with other goals and what effect it has on myriad stakeholders. What *Urgenda* makes clear is that the adoption of a climate target by a country has (at least) two distributive choices. This is just the starting point of the distributive choices embedded in the choice of climate instruments.

After a target has been assumed, there is the question of achieving the target. It could be argued that this is where distribution ends and allocation begins. This is why the conflicts regarding National Allocation Plans (NAP) of the EU ETS were – as the phrase signifies – about *allocation*. However it needs to be stressed that allocation incorporates distributive preferences and possible redistributive effects; the allocation and adoption of Kyoto targets amounts to a distribution of climate responsibility. Such responsibility is marked by unequal distribution (captured in the concept of Common but Differentiated Responsibilities), and liability of Annex 1 countries to pay penalties for non-compliance. This distributed responsibility is then passed on to industries in the EU through the EU ETS. It will require some explanation of the EU legal framework to attain clarity as to how this is done. Later on in this chapter, I will show that the method of carbon accounting and emissions inventories facilitated by the IPCC allows for the distribution of liability to industries.¹⁵ As discussed in Chapter 5, the selection of industries and the imposition of penalties for non-compliance are distributive choices, as it involves different stakeholders bearing unequal burdens. Such distributive choices play a redistributive role depending on the gains or losses that the EU, Member States and private parties bear due to the consequences of compliance or non-compliance. Writing as early as 1976, Giandomenico Majone – arguably the first political scientist to comprehensively analyse the role of regulation in the EU – argued that conflicts in relation to environmental policy are about distribution and redistribution,¹⁶ and it is difficult to sever these concerns

¹⁴ *Urgenda*, paras. 4.71 and 4.75

¹⁵ See Section III.A (iii).

¹⁶ Giandomenico Majone, 'The Rise of the Regulatory State in Europe' (1996) 17 *West European Politics* 77.

from the content of the regulations themselves.¹⁷ In addition to the industrial interests that fought against the adoption of a carbon tax described in Chapter 5, influential Member States sought to have a hold on the distributive choices and redistributive consequences of climate regulation. Thus, in addition to climate targets, climate instruments also entail distributive choices.

ii. Distribution, Allocation of Burdens and Redistribution: Caney meets Calabresi
Simon Caney's work on the philosophy of climate action is unusual among his peers; he provides a qualified defence of emissions trading as an appropriate regulatory response to climate change.¹⁸ In the process, he provides nuance as to how the distribution of climate responsibility may be approached.¹⁹ Notably, he makes a distinction between the *distribution of responsibilities* and the *distribution of burdens*, both of which come into play after targets have been decided on.²⁰ The primary distinction between distribution of responsibilities and distribution of burdens is that the former deals with the assignment of duties or responsibilities to prevent climate change, which is in effect the assignment of liability 'of those who have failed to comply with theirs [responsibilities]'.²¹ The latter deals with the imposition of burdens on third-parties without responsibilities by those who have been assigned such responsibilities. Per Caney, the shifting of such burdens may be justified given the 'priority of climate change'; however, it amounts to 'appeasing reluctant emitters [or responsibility bearers] and acceding to their demands to bear less costs than they ought to'.²² Such a shift may be required

¹⁷ Giandomenico Majone, 'Choice among Policy Instruments for Pollution Control' (1976) *Policy Analysis* 589.

¹⁸ Simon Caney, 'Markets, Morality and Climate Change: What, if anything, is wrong with emissions trading?' (2010) 15 *New Political Economy* 197.

¹⁹ Simon Caney, 'Climate Change and Non-ideal Theory: Six ways of responding to noncompliance' in Clare Heyward and Dominic Roser (eds) *Climate Justice in a Non-ideal World* (Oxford: OUP, forthcoming). Pre-copy version available at: https://www.academia.edu/10371799/Climate_Change_and_Non-Ideal_Theory_Six_Ways_of_Responding_to_Noncompliance [accessed May 30, 2016].

²⁰ Caney acknowledges that selection of a target has underlying interests and ideals; a target 'reflects not just empirical beliefs about the causes and impacts of climate change but also normative commitments'. *Ibid*, p. 3.

²¹ *Ibid*, p. 5.

²² *Ibid*, pp. 7 – 8.

to achieve compliance, but Caney warns, those bearing original responsibilities may exploit the need for compliance; further, burden-shifting needs addressing questions such as whether there are ‘minimal or very great burdens on some, on whom it falls, how many are adversely affected, for how long, whether they can be compensated’, among others. In making such judgements, it is necessary to see whether *reassigning responsibilities may be worse than unjustified burden shifting*.²³ In the event compliance with a target can be met with minimal burdens borne by those that do not bear responsibilities, then there appears to be a presumption against reassigning responsibilities. It may be asked, given that the assignment and reassignment of responsibilities are so important for Caney’s framework, on what basis is such assignment decided? To begin with, Caney’s primary concern is compliance with pre-decided targets; or effectiveness. As to who should be assigned responsibility to comply with targets, Caney argues that those who are comparatively ‘advantaged’ should pay.²⁴ The ‘advantaged’ in turn is characterised by a combination of an Ability to Pay Principle (anyone who can maintain ‘a decent standard of living’²⁵) and a Polluter Pays Principle (a polluter is characterised as someone who has emitted excessive amounts of carbon dioxide in the past). Combining both, Caney arrives at a ‘History Sensitive Ability to Pay’. Based on this concept, Caney argues that ‘the most advantaged should bear the cost of the emissions of both past generations and the disadvantaged’²⁶; and hence is not in favour of an equal per capita entitlement to pollute, as is the assumption in schemes such as the PCT. As long as a regulatory choice meets the ability and advantage criteria laid out, Caney is indifferent to a tax or a trading system. This indifference, however, is not practical. As we saw in Chapter 5, public choice considerations pre-empt such indifference. Further, without putting in place additional distributive regulation, a tax or a trading system may well be regressive. This brings us to Calabresi.

To a considerable extent, Caney’s analysis resembles Calabresi’s work. Calabresi would characterise the distribution of responsibilities as the

²³ Ibid, p. 13.

²⁴ Simon Caney, ‘Climate Change and the Duties of the Advantaged’ (2010) 13 *Critical Review of International Social and Political Philosophy* 203.

²⁵ Ibid.

²⁶ Ibid, p. 221.

assignment of liability, and the allocation of burdens, ex-ante and ex-post, is a primary consideration that informs such assignment. Similar to Caney's 'most advantaged' is Calabresi's 'least cost avoider'. However, responsibility is more complex in Calabresi's characterisation of 'accident-like situations', he would question a responsibility-based polluter-pays principle. With regard to climate change, it is not easy to identify causal responsibility and hence there is a need for a constructive categorisation of end-user liability. Arguing in favour of incurring identification costs regarding assignment of liability, Calabresi had cost-effectiveness in mind; the least cost avoider would be required to look for ways to reduce the costs borne, and this would involve mechanisms of requiring parties who do not bear such liability to bear some or all of the burdens. This would also involve looking for ways to reduce production costs and transaction costs²⁷ to comply with an obligation and avoid invoking liability enforcement mechanisms. Thus, the identification of the party on whom liability is imposed is important in a Calabresian framework; whether polluters pay or not depends on the burdens they bear, and they can avoid liability by complying with the actions required of them. But it may be asked: why would a regulator incur identification costs? And what is the point of allowing parties who could be held liable to shift their burdens to those who cannot? The answer, quite simply, is to create the architecture for the functioning of a market. Calabresi does not neglect the market, but rather concentrates on the institutional aspects that would lead a market to have desirable effects. This is where Calabresi would part company with Caney, as the concentration is not solely on distribution, but how to achieve emissions reductions. As discussed in Chapter 5, the EU ETS combines the assignment of liability and the discovery of price through a market. Scholars in the US have pointed out that finding a social cost of carbon is notoriously difficult, leading to unavoidable arbitrary normative

²⁷ The identification of 'transaction cost' is a notorious administrative cost. Following Calabresi's framework, it is not important to distinguish between production costs, assessment costs and transaction costs as the primary concern is identification of parties who would bear liability rather than the actual costs of exchange. So the characterization of costs is not crucial.

judgements in quantifying such cost.²⁸ The reason this exercise has been undertaken is because there isn't a common market in the US to determine the value of emissions reductions.²⁹ The costs of pricing carbon are avoided by opting for a market mechanism as has been the case with the State-level cap-and-trade systems in the US such as the Regional Greenhouse Gas Initiative (RGGI) and the Californian cap-and-trade system.³⁰ It is this combination of distribution and institutionally facilitating a market that makes the EU ETS (and similar cap-and-trade systems with hard caps and price discovery through auctioning or other market mechanisms) distinctly Calabresian. With this Caney-meets-Calabresi discussion on distribution, burden-shifting, cost-effectiveness and redistribution in mind, we are well placed to address the regulation of a potential EET mechanism head-on.

Given the constraining and facilitative dimensions of regulation on one hand, and the allocative and potentially redistributive role on the other, any consideration of a PCT or an EET policy is woefully incomplete without a discussion on multi-level regulation. I seek to work towards filling this gap in this chapter and the next. Admittedly, this gap is too great to exhaustively address, and I will use subsidiarity and proportionality as heuristic devices to guide me through the rest of the book. The reason as to why I pick these two devices is simple: they are the primary normative devices that moderate the appreciation of both European primary and secondary law. Irrespective of whether the interest is to preserve the stability of the internal market or to fulfil objectives related to climate change, reasoning about normativity cannot escape these mediators. I also admit that this choice is not informed by a free-falling inductive finding on perusing literature on European law. As indicated in Chapter 2, I was interested in understanding whether an EET could be extended sectorally and geographically, and for this purpose

²⁸ Masur and Posner, 'Climate Regulation and the Limits of Cost-Benefit Analysis', *supra*; Daniel Farber, 'Coping With Uncertainty: Cost-Benefit Analysis, The Precautionary Principle, and Climate Change' (2015) 90 *Washington Law Review* 1659, pp. 1689 – 1719.

²⁹ Masur and Posner, *Ibid*, p. 1561.

³⁰ For a comparison of such systems with the EU ETS, see Simone Borghesi and Massimiliano Montini, 'The Best (and worst) of GHG emission Trading Systems: Comparing the EU ETS with its Followers' (2016) 4 *Frontiers in Energy Research* 1.

the appropriate level of governance becomes an important consideration. Further, equity and liberty are at the heart of any considerations of an EET. Proportionality assumes a useful heuristic for investigating these two aspects, and situating them within a legal framework. Among these two mediators, subsidiarity has received more attention owing to the fact that climate change law, and environmental law generally, in the EU has conventionally be considered to be about figuring out the relations between the EU and Member States, or 'who' is required to and allowed to take action. This could be due to the nature of European legal inquiry itself: nation-states and institutions in Brussels have been considered to the object of legal scholars' attention. I therefore first turn to this question, as EU climate law can be better introduced by looking at a division of powers. I will then proceed in the next chapter to considering whether proportionality offers an 'autonomous standard of reason' for a regulatory appreciation of a climate change measure like the EET.

II. THE LEGAL BASIS FOR EU AND MEMBER STATE CLIMATE POLICY

The preference for a top-down discussion on climate regulation in the EU featured strongly in the discussions around *Urgenda*. The Court directed the government to pursue a target of 20% emissions reductions by 2020; in contrast, the Dutch government was on track to meet a target of 16%. While the Court found this Order to be in compliance with EU law, a flurry of criticisms by notable scholars in both academic journals and popular media pointed to the judgement being incompatible with both primary and secondary EU law.³¹ It may be noted that the criticism was levelled with respect to the adoption of a higher target, and not even a policy mechanism adopted to implement such a target. The level of criticism that can be anticipated in relation to a Member State policy mechanism such as the EET may be anticipated to be much higher, and the objections far more intense. To have a clear hold on this point, it is necessary to take a look at EU climate law.

³¹ For a review, see Roy and Woerdman, 'Situating Urgenda', *supra.*, p. 167.

A. EU Primary Law on Climate Change

The explicit inclusion of climate change in EU primary law occurred in 2009 by way of an amendment to Article 191 of the Treaty on the Functioning of the European Union (TFEU) dealing with 'Environment'.³² This inclusion did not meet much resistance, as the Maastricht Treaty already provided the basis for climate action (it mentioned 'promoting measures at international level to deal with regional or worldwide environmental problems' as a Community objective). I would in fact go a step further and suggest that the EU has been historically predisposed towards climate change action right from the moment it started being interested in environmental issues. Unlike the United States, the genesis of the EU's cognizance of environmental issues is intimately linked to the reasoning that it has competence to deal with external issues that have a bearing on its internal legislation and executive policies. Shortly after the CJEU decision in *European Road Transport Agreement*³³ that allowed the Commission to exercise its 'external jurisdiction', the first non-binding Environmental Action Programme was drafted by the Commission;³⁴ and it was as early as the 1970s that the Commission sought to reconcile the concerns of competitiveness integral to the common market and the requirements of international environmental agreements.³⁵ Notwithstanding the EU's shaping of environmental law in association with international developments that lends itself to playing a major role in the implementation

³² Article 191 (1) states: Union policy on the environment shall contribute to pursuit of the following objectives: • preserving, protecting and improving the quality of the environment; • protecting human health; • prudent and rational utilisation of natural resources; • promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.'

³³ Case 22/70 *EC Commission v. EC Council* [1971] ELR 60-79.

³⁴ The link between the *European Road Transport Agreement* judgement and the development of EU environmental law is made in Chad Damro, Iain Hardie and Donald Mackenzie, 'The EU and Climate Change Policy: Law, politics and prominence at different levels' (2008) 4:3 *Journal of Contemporary European Research* 179,182.

³⁵ Since then, EU environmental law has taken a life of its own, has been extended to areas such as public health, and the body of law revolves largely around whether Member States can infringe EU law on free movement and competition based on environmental considerations. For a review see Jan Jans and Hans B Vedder, *European Environmental Law* (Europa Publishing, 2012).

of its Kyoto commitments, the specific inclusion of climate change in the TFEU was a way to specify in its primary law that the EU's engagement with climate change would have an effect on *all* policies across the Union.³⁶ It is in response to this objective; i.e. how climate policy would be implemented and enforced, and how it engages with other policies, that the body of current EU law on climate change has been fleshed out.

The formulation of measures in response to Article 191 TFEU operates under the aegis of Article 192, where 192(1) provides measures that can be adopted by the Council and Parliament by following an ordinary legislative procedure involving a qualified majority vote in the Council and 192(2) requires the Council to follow a special legislative procedure involving a unanimous vote when it seeks to adopt measures that are (i) 'primarily of a fiscal nature', (ii) affects town planning or water management, and (iii) 'significantly' affects a Member State's choice of energy source and energy supply. This little bit of text contained in Article 192(2) that provisions of a primarily fiscal nature requires a unanimous Council vote is a crucial set of words in the history of EU climate law, as it thwarted a Commission proposal on a carbon tax,³⁷ but allowed a proposal on emissions trading to pass muster. Without going into a debate of whether a carbon tax or an emissions trading scheme is more desirable, it is evident that a carbon tax is construed to be primarily of a fiscal nature, rather than primarily a climate change instrument. This demonstrates that the specific nature of climate change had to defer to the way in which a fiscal instrument is generally interpreted in EU law.³⁸ The dependency of the nature of the response to climate change on Member State representatives in the Council brings us to questions of federalism that influence the development of climate law in the EU.

³⁶ Article 11, TFEU, states: Environmental protection requirements must be integrated into the definition and implementation of the Union policies and activities, in particular with a view to promoting sustainable development.

³⁷ Commission, 'Proposal for a Council directive introducing a tax on carbon dioxide emissions and energy' COM (92) 226 final.

³⁸ Practically speaking, the EU ETS with a complete auctioning system could be said to resemble a carbon tax. Perhaps the Commission did indeed find an implementation instrument that took into account the specific nature of climate change.

By virtue of Articles 11 and 191 TFEU, the EU is required to pursue its objective of responding to climate change, which is evident from the European Climate Change Programme (ECP) comprising more than thirty initiatives cutting across different sectors and domains of law with the EU ETS being the most visible item. The EU's discretion in relation to climate policy, however, is not unfettered, and is not restricted to the representation of the Member States in the Council. By virtue of Article 4(2) TFEU, the EU and Member States enjoy shared competence with respect to areas related to climate change policy including environment, transport and energy. As to how shared competence is exercised is one of the most hotly contested issues in the gamut of EU law, and it is this issue that has characterised most political differences, legal disputes and scholarly interest in relation to climate policy. This brings us to Article 193 TFEU.

Article 193 TFEU states: *The protective measures adopted pursuant to Article 192 shall not prevent any Member State from maintaining or introducing more stringent protective measures. Such measures must be compatible with the Treaties. They shall be notified to the Commission.*

The above can be interpreted in two ways, one that is more favourable to the Member States, and the other more favourable to the EU. The first reading divides the Article into two parts. The first part is that Member States have a right to take more stringent measures. As Lorenzo Squintani has observed, '...it [Article 193] grants a more or less incontestable right to the Member States to adopt or maintain more stringent measures'.³⁹ The second component is that such stringent measures need to be compatible with EU law. The consequence of this division is that of allocating the burden of proof to demonstrate incompatibility. If the distinction is accepted, then the effect of Art 193 would be that Member States have a right – or an entitlement – to adopt more stringent or more protective measures, unless its incompatibility can be demonstrated. The other reading is linked to the interpretation of the word 'Treaties'. It is a matter of interpretation as to whether 'Treaties' used in the second sentence includes the implementation of such treaties through secondary law. There is a possibility that if 'Treaties' includes secondary law,

³⁹ Lorenzo Squintani, *Gold-Plating of European Environmental Law*, PhD Dissertation, p. 19.

then the first sentence would become redundant. This would be because any possible violation of secondary law would disallow any stringent measures from being taken. Thus, if there is secondary law on the issue of climate change and such secondary law amounts to harmonisation of EU climate law, then any measure adopted by Member States can be assumed to be incompatible. In practice, this interpretation also results in the allocation of the burden of proof: in this case the Member State would need to establish the compatibility of measures adopted. It is also possible that the word ‘notified’ can be interpreted to mean obtaining approval of the Commission. If the Commission has the power to decline a notification, then the second reading – i.e. burden of proof rests with the Member State in question to establish compatibility of any measure taken – would be more persuasive. These two readings are difficult to reconcile within the textual parameters of primarily law; this prompts a turn to the particulars of secondary law.

B. EU Secondary Law on Climate Change

The secondary law on climate change is essentially the suite of instruments covered under the ECP. The two most visible specific instruments are the EU ETS Directive and the ESD; in addition, there are several instruments with regard to standard-setting that may also have a bearing on Member State policies. A quick glance at the Commission ECP webpage leads one to think that the EU ETS covers some industrial sectors, while the ESD covers other sectors, or non-ETS sectors.⁴⁰ From a regulatory point of view, I would like to suggest that viewing the two legislations in terms of sectors that can be easily demarcated is not helpful for responsibility distribution, burden allocation or implementation. To understand the scope and relationship between the different instruments, let us turn to the instrument that sets the terms of distribution, the ESD.

i. The Scope of the Effort Sharing Decision

Article 1 of the ESD states: ‘*This Decision lays down the minimum contribution of Member States to meeting the greenhouse gas emission reduction commitment*

⁴⁰ http://ec.europa.eu/clima/policies/strategies/2020/index_en.htm; also the ESD webpage: http://ec.europa.eu/clima/policies/effort/index_en.htm.

of the Community for the period from 2013 to 2020 for greenhouse gas emissions covered by this Decision, and rules on making these contributions and for the evaluation thereof.

From this Article, we get the following points: (1) the Community has a greenhouse gas reduction commitment for 2020, (2) this commitment is distributed among Member States, whereby they are required to make a minimum contribution, (3) the ESD lays down ‘rules on making these contributions’ (I quote this verbatim as scope of the phrase ‘rules on making these contributions’ is not clear) and evaluating these contributions. The basis for (1) or the reduction commitment by 2020 can be gleaned from a European Council decision of 1993 that recognised the obligations of the EU with respect to the UNFCCC.⁴¹ Thus, the reduction commitment is essentially the Council’s recognition of the responsibility the EU has assumed by virtue of its ratification of the UNFCCC and the obligations spelled out in decisions that give effect to the UNFCCC, namely the Kyoto Protocol and the periodic Conference of Parties decisions. To clarify, Recital 9 of the ESD mentions that the decision deals with the ‘*independent* reduction commitment of the Community’ [emphasis added]. The Member States of the EU are signatories to the UNFCCC as well, by virtue of which they may assume responsibilities. As to whether there could be any constraints on them doing so is a matter of the law on the extent to which international obligations may be adopted unilaterally by Member States.⁴² This brings us to (2) regarding minimum contribution. This minimum contribution is a distribution of responsibility among Member States; Article 3(1) specifies that each Member State must limit its greenhouse gas emissions ‘at least by the percentage set for by the Member State’ by 2020. The basis for such distribution is the ‘relative per capita GDP’⁴³ of Member States.

⁴¹ Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:1994:033:FULL&from=EN>

⁴² For some nuance in this regard, see Riccardo Pavoni, ‘Controversial Aspects of the Interaction between International and EU Law in Environmental Matters: Direct Effect and Member States’ Unilateral Measures’ in Elisa Morgera ed. *The External Environmental Policy of the European Union : EU and International Law Perspectives* (Cambridge: CUP 2012), pp. 347-377.

⁴³ Recital 8 ESD.

Such distribution does not say anything about allocation of burdens⁴⁴ and implementation. For that, we turn to (3).

The phrase ‘rules on making the contributions’ could be interpreted to mean that all the rules with regard to how Member States make minimum contributions are exhaustively covered in the ESD; i.e. all aspects of Responsibility Distribution, Burden Allocation and Implementation could potentially be covered under the ESD. However, the definition of greenhouse gases points both to the fact some aspects are covered, and also to the limits of the scope of the ESD. The definition states: *‘Greenhouse gas emissions’ means the emission of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆) from the categories listed in Annex I, expressed in terms of tonnes of carbon dioxide equivalent, as determined pursuant to Decision No 280/2004/EC, excluding greenhouse gases emissions covered under Directive 2003/87/EC.*

The ‘categories’ that emit greenhouse gases that are considered for the purpose of meeting the required minimum contribution are specified in Annex 1 of the ESD. Thus, emissions outside the categories mentioned may not be accounted for satisfying the responsibility of the Member States in meeting their minimum contributions. These ‘categories’ include ‘sectors’: Energy, Industrial Processes, Solvent and other product use, Agriculture and Waste. There is no explicit mention of ‘housing’ or ‘residence’. However, ‘fuel’ is a category and that would include fuels used inside residences. To this extent, the ESD covers implementation; it specifies the categories within which sectors and sources are situated. Implementation also includes the exclusionary provision contained in the definition: greenhouse gas emissions covered under the EU ETS Directive are explicitly excluded. This may explain why the ESD may be said to cover all emissions that are non-ETS. This leads us to a quandary: if the ESD excludes greenhouse gas emissions covered under the EU ETS, then can the reductions under the EU ETS Directive contribute to the minimum requirement?

⁴⁴ To clarify, there is intuitively an allocation of burden to Member States. However, per the conceptual framework discussed earlier, the required minimum contribution is a distribution of responsibility. Burden allocation refers to how the burden may be allocated after it has been conferred or assumed. Such allocation under the ESD would not have an effect on the sanctity of the responsibility of the Member States to meet their minimum contribution.

A reading of the Recitals of the ESD demonstrates the compatibility of the two Directives. Recital 6 states: *Directive 2003/87/EC establishes a scheme for greenhouse gas emission allowance trading within the Community, which covers certain sectors of the economy. All sectors of the economy should contribute to emission reductions in order to cost-effectively achieve the objective of a 20 % reduction of greenhouse gas emissions by 2020 compared to 1990 levels. Member States should therefore implement additional policies and measures in an effort to further limit the greenhouse gas emissions from sources not covered under Directive 2003/87/EC.*

From the above we get that the EU ETS Directive covers some ‘sectors’, and all sectors need to meet the 20% responsibility assumed by the EU in a cost-effective manner. Member States are encouraged to bear the burden of implementing ‘additional’ policies and measures for ‘sources’ not covered under the EU ETS Directive. With regard to ‘additional’ there appears to be an indication that the implementation freedom of Member States is restricted to sources not covered under the EU ETS. Thus, there appears to be no overlap in the shared competence of the EU and Member States; the ESD applies only to non-ETS sources. I do not use the popular term ‘non-ETS sectors’ as I think the words ‘sectors’ and ‘sources’ should not be assumed to be interchangeable. What is the difference, then, and what do these words mean?

There is confusion in EU secondary climate law with regard to foundational terminology: the words ‘sector’, ‘installation’ and ‘source’ are not clarified. However, reading the ESD and the EU ETS Directive together, we can arrive at the following framework: Category is the umbrella term used in the ESD that includes substances and processes; some of these categories are classified into sectors⁴⁵ by the EU ETS Directive. Each sector has installations, and each installation has multiple sources. This is evident from the definition of emissions in Article 3(b): ‘emissions means the release of greenhouse gases into the atmosphere *from sources in an installation* or the release from an aircraft performing an aviation activity listed in Annex I of the gases specified in respect of that activity.’ [emphasis added]. This definition suggests that a source is identified by the sort of activity it performs.⁴⁶ However, that is

⁴⁵ This assumes that all the EU ETS sectors can be classified into ESD categories.

⁴⁶ Annex 1 of the EU ETS Directive.

not the entire conceptualisation; the ‘activities’ listed in Annex 1 are further broken down into components. The identification of these components is operationalised through the Monitoring, Reporting and Verification Regulation (MRV Regulation)⁴⁷ and the Benchmarking Decision (for free allowances),⁴⁸ and it seems to be based on the identification of *direct emissions* and *indirect emissions*. Thus, a source may be defined as *an activity that results in direct emissions*. With the exception of aviation, such sources are located in installations. This can be diagrammatically represented as follows:

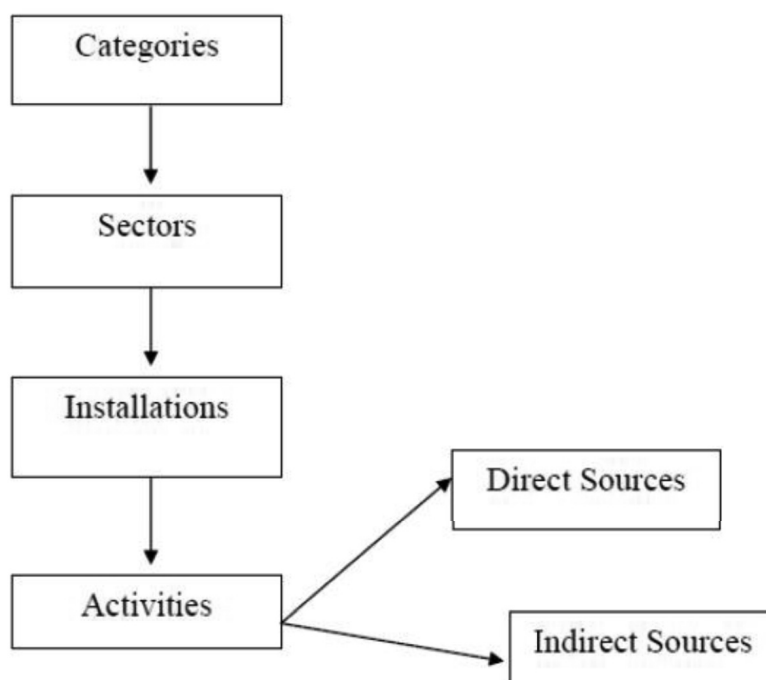


Figure 5: Sources of Emissions

⁴⁷ Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council Text with EEA relevance *OJ L* 181, 12.7.2012,

⁴⁸ Commission Decision of 27 April 2011 determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (notified under document C(2011) 2772) *OJ L* 130, 17.5.2011

There could be two possible reasons behind the regulatory categorisation of sources: (i) to encourage least cost emissions reductions in the production process, and (ii) to facilitate monitoring of emissions from installations to meet their cap, and monitoring in turn becomes important to assess emissions accurately, and avoid the problem of double counting of emissions.⁴⁹ From the ESD, we can surmise that for purposes other than satisfying their minimum contribution, it is possible for Member States to identify other sources, installations, sectors. However, it would be difficult to find a source of emissions that does not fall into one of the categories mentioned in Annex 1 of the ESD. If a source (whether covered under a Category or not) coincides with a source covered under the EU ETS Directive, it would probably not be 'additional' and there can be a conflict. In this regard, Article 24 of the EU ETS Directive mentions that if Member States seek to 'apply emission allowance trading' to 'greenhouse gases', 'activities' and 'installations', then prior approval from the Commission is required. Thus, any Member State measure taken pursuant to the ESD that includes 'allowance trading' has to be compatible with the EU ETS. Article 24a clarifies that if a Member State implements any mitigation project that 'issues allowances or credits', then the harmonised regulatory procedure would have to be followed. However, Article 24a(3) contains an important qualification that '*A Member State can refuse to issue allowances or credits in respect of certain types of projects that reduce greenhouse gas emissions on its own territory*'. It seems that a Member State can choose to opt for implementation mechanisms that do not involve issuance of allowances and credits. If methods of implementation of targets other than issuance of allowances or credits or allowance trading are applied to 'activities' or 'installations', then it appears that a prior approval from the Commission would not be required and Member States have some leeway. This is supported by the explanation to Article 24a(1) that Member State measures involving allowances and credits 'shall not result in the double-counting of emission reductions nor impede the undertaking of other policy measures to reduce emissions not covered by the Community scheme'. The suggestion seems to be that a unilateral Member State measure akin to an allowance trading

⁴⁹ Articles 11 and 24a of the EU ETS Directive. Thus the costs of monitoring and verification can be balanced against the benefit of reducing or avoiding double counting.

scheme may result in double counting and also interfere with non-EU ETS measures. This reveals that double counting is a problem for any Member State measure that involves issuance of allowances and credits, and such measures may interfere with other mitigation measures initiated by Member States, in addition to possible interference with the EU ETS.

Admittedly, the ESD has nothing specific to say about responsibilities distributed to, burdens allocated to, or any mechanism of implementing emissions from individuals or households or the residential sector. This is primarily because the ESD does not provide the classificatory tools in identifying an individual as a source or a house as an installation or the residential sector as a 'sector'. One inference that can be readily drawn is that to the extent sources and sectors are engaged with any of the categories mentioned in Annex 1, they could be utilised for meeting the minimum contributions of Member States. A clearer picture on distribution, burdens and implementation may be obtained by taking a look at the EU ETS Directive.

ii. The Scope of the EU ETS

The EU ETS is seen as a means of implementing climate responsibility; it is also a tool of burden allocation, and indirectly a tool of responsibility distribution as well, primarily with regard to responsibility redistribution. All of these traits can be found in the most popular argument in favour of the EU ETS: cost-effectiveness and efficiency. I use these terms separately because that is the wording of the Directive; Article 1 begins with: *This Directive establishes a scheme for greenhouse gas emission allowance trading within the Community in order to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner.* These two terms may be read *eiusdem generis*, but as Stavins had observed around the time the Kyoto Protocol was signed:

“From an economic perspective, the first candidate criterion for instrument assessment should probably be relative efficiency, that is, the degree to which instruments are capable of maximizing net benefits. But the efficiency criterion can be problematic, because it requires not only knowledge of the costs of abatement, but also knowledge of the benefits of abatement. And the latter requires both an understanding of the physical consequences of climate change and the economic valuation of those consequences. This information burden is overwhelming in many circumstances, as it surely is at present in the global climate context; and

*so frequently the less ambitious criterion of cost effectiveness has been used, that is, seeking a policy instrument that achieves a given target or goal (which may or may not represent the efficient level of control) at minimum aggregate cost of abatement.*⁵⁰

I cite the above in full because it shows a clear distinction between cost-effectiveness and efficiency. It is a matter of interpretation as to whether the EU ETS Directive has opted for the ‘ambitious criterion’ of efficiency in addition to cost-effectiveness, given that both them are mentioned. Based on the interpretation accorded by the CJEU in *Iberdrola* (discussed below), it appears that a more restrictive criterion is preferred; the primary benefit sought is the reduction of emissions at a low cost. Other benefits are secondary. It may be noted, however, that the reduction of emissions sought is not restricted to targets; effectiveness extends beyond the meeting of existing targets, as is evident from the second component of Article 1: *This Directive also provides for the reductions of greenhouse gas emissions to be increased so as to contribute to the levels of reductions that are considered scientifically necessary to avoid dangerous climate change.* Thus, facilitating the reduction of greenhouse gas emissions – even beyond existing targets – is the core objective of the Directive.

Some scholars have compellingly argued in favour of emissions reductions being the primary objective of the EU ETS Directive, and other objectives such as economic efficiency and energy efficiency being secondary objectives.⁵¹ The fact that emissions reduction is the ‘principal objective’ has been clarified by the preliminary opinion issued by the CJEU in *Iberdrola*⁵². The Court observed: “... *it should be noted that the principal objective of Directive 2003/87 is to reduce greenhouse gas emissions substantially. That objective must be attained in compliance with a series of sub-objectives and through recourse to certain instruments. The principal instrument for that purpose is the EU scheme for*

⁵⁰ Robert N. Stavins, ‘Policy Instruments for Climate Change: How Can National Governments Address a Global Problem?’ (1997) *University of Chicago Legal Forum* 293.

⁵¹ Squintani, Holwerda, and Peeters, ‘Regulating Greenhouse Gas Emissions from EU ETS Installations’, *supra*.

⁵² Cases C-566/11, C-567/11, C-580/11, C-591/11, C-620/11 and C-640/11 *Iberdrola and Others* EU:C:2013:660.

*greenhouse gas emissions trading. As indicated in recitals 5 and 7 to Directive 2003/87, among the other sub-objectives to be fulfilled by the scheme are the safeguarding of economic development and employment and the preservation of the integrity of the internal market and of conditions of competition.”*⁵³

Thus, all other objectives are secondary objectives. The wording of Article 1, however, does not bear out a hierarchy between the objectives of emissions reduction and cost-effectiveness. However, given that additional reductions are contemplated, it seems reasonable to suggest that the goal of cost-effectiveness should not retard the achievement of emissions reductions. The ‘benefits’ component of efficiency as Stavins notes above is notoriously difficult to understand and compute; but it would be safe to say that emissions reduction and efficient climate policy are not the sole reasons behind the existence of the EU ETS. Recital 20 mentions that the ‘Directive will *encourage* the use of more energy-efficient technologies’ [emphasis added]. This wording seems to indicate that energy efficiency is not an obligation enshrined in the EU ETS Directive; to that end, encouraging energy efficiency measures by Member States or the EU should not interfere with the objective of emissions reduction. Encouragement, however, does not extend to the liability of some agents to reduce emissions.

The scope of the EU ETS Directive came to the fore in the *Iberdrola* opinion mentioned above, where a Spanish levy on electricity producers who received grandfathered allowances for Phase 1 (and passed-through such costs to consumers) was assessed for compatibility with EU law. The Court did allow the levy, but not without a detour. With regard to energy efficiency, there was a difference between the opinion of Advocate General Kokott and the Court. Pointing to Recital 20, AG Kokott observed that energy efficiency is an objective of the EU ETS Directive, and the Spanish levy in question was incompatible with this objective, given that installations were disincentivised to become energy efficient once the levy was imposed.⁵⁴ Though the Court did not explicitly disagree with AG Kokott, it held that the decision to invest in

⁵³ Ibid, Para 43.

⁵⁴ *Opinion of Advocate General Kokott* EU:C:2013:191, para 93.

energy efficient technologies is left to the discretion of electricity producers;⁵⁵ further, energy efficiency⁵⁶ was not recognised as an explicit objective of the EU ETS.⁵⁷ Following this line of reasoning, Member States seem to have more leeway in adopting energy-efficiency measures without the fear of falling foul of the EU ETS Directive.

It could also be inferred from *Iberdrola* that the benefits of the efficiency component in Article 1 is read narrowly; and emissions reduction is the only principal objective. Given this line of reasoning, it seems fair to suggest that when the scope of the EU ETS is being considered in relation to the freedom of Member States and others stakeholders in adopting measures, the only aspect to be kept in mind is the achievement of emissions reductions contemplated under the EU ETS. Concomitantly, should any measure add to the ‘comprehensive’ reduction of emissions, then some compromises on cost effectiveness, and the sub-objectives of functioning of the internal market and competition may be subject to tests of subsidiarity and proportionality.

The EU ETS Directive implements the distribution of liability and allocation of burdens primarily through the EU institutional machinery; though there is some leeway to Member States as suggested above and will be discussed in more detail in the next section. Further, the Directive does also cover distribution of responsibility: firstly, as mentioned earlier, Article 1 of the Directive contemplates that additional reductions may be attained through the EU ETS. Second, unlike the ESD, direct emissions of some activities performed by installations are covered, and so installations are made responsible. Per the enforcement mechanism contemplated, installations would be fined – and substantially too – should they fail to surrender allowances. Thus, installations are *liable* to cut down on emissions, and Member States are responsible for implementing this enforcement mechanism. The *Iberdrola* judgement made another observation that speaks

⁵⁵ *Iberdrola*, para 49.

⁵⁶ In this regard, Rodriguez observes that a ‘difference needs to be drawn between promoting energy efficient technologies and the promotion of energy efficiency in general terms.’ Daniel Perez Rodriguez, ‘Absorbing EU ETS Windfall Profits and the Principle of Free Allowances: *Iberdrola and Others*’ (2014) 51 *Common Market Law Review* 679, p. 691.

⁵⁷ *Ibid.*

to the responsibility of stakeholders. The Court noted: “...*in order for Directive 2003/87 to attain its objective of reducing greenhouse gas emissions in a cost-effective and economically efficient manner, it is not necessary, as was noted in paragraph 41 above, for undertakings to pass on in consumer prices the costs relating to emission allowances allocated to them free of charge.*”⁵⁸ That does not mean that firms are prohibited from passing through costs to consumers: “*the extent to which electricity producers may pass on in prices the costs associated with the use of emission allowances has no impact on the reduction of emissions.*”⁵⁹ Given that costs of the EU ETS may be passed through to consumers, the EU does not make consumers liable, but nonetheless places no restriction on the burdens borne by them.⁶⁰ This is in stark contrast to the federal arrangement in China for instance, where costs incurred by installations are prohibited from being passed through to consumers.⁶¹ Thus, while the Directive distributes responsibility to installations by arranging for their liability through the imposition of a penalty, it does not distribute responsibility to the final consumers. The sources of direct emissions monitored and verified are part of installations. Thus, there is no liability imposed on the final consumer for their direct emissions. Having said that, the Directive places no restriction on Member States or Installations from allocating the burden of bearing the costs for climate action to the final consumer. This would apply to the achievement of additional emissions as well; measures adopted for attaining additional emissions reductions have to satisfy the cost-effectiveness criterion of the EU ETS Directive; Article 1 of the EU ETS Directive speaks both of cost-effectiveness as well as the applicability of the EU ETS in relation to

⁵⁸ *Iberdrola*, para 56.

⁵⁹ *Ibid*, para 57.

⁶⁰ It may also be noted that a pass-through could be considered to be a reduction of consumer welfare, but this argument was neither mooted nor decided on. Having said that, passing through costs to consumers is not a simple process; factors revolve largely around elasticity of demand, substitutability of the product and organizational concerns in the supply chain. Chukwumerije Okereke and Devin McDaniels, ‘To what extent are EU steel companies susceptible to competitive loss due to climate policy?’ (2012) 46 *Energy Policy* 203, p. 204. Thus, firms can pass on a proportion of their carbon prices to consumers.

⁶¹ See ZhongXiang Zhang, ‘Carbon Emissions Trading in China: The Evolution from Pilots to a Nationwide Scheme’ (2015) *Centre for Climate Economic & Policy Working Paper* 1503. I also thank Yingying Zeng for bringing this to my attention.

additional climate action.⁶² In this regard, the EU ETS Directive goes a step further than the ESD: while the ESD applies only to the 20% reduction commitment, the EU ETS contemplates additional emissions. This puts us in a quandary. Article 193 TFEU allows for Member States to take additional environmental action which may include more sources of emissions such as households. However, the EU ETS Directive seems to confine additional climate action that Member States may take to the terms provided in the Directive. How are we to reconcile Article 193 TFEU and Article 1 of the EU ETS Directive? This brings us to Subsidiarity.

III. SUBSIDIARITY AND THE EET

The idea of subsidiarity can be traced to the Catholic idea of decentralisation, where governance is best left to the smallest unit, which may well be an individual.⁶³ Theoretically, subsidiarity does not need to be restricted to pre-existing formal institutions (such as State-level and EU-level institutions), and could well apply to the creation of new formal institutions at the sub-State or supra-State level. It could also apply to the role of non-formal institutions such as those that created the material world of the carbon economy, or social relations that influence motivation. It would be incorrect, therefore, to think about subsidiarity in terms of European supremacy or liberal nationalism.⁶⁴ The

⁶² The applicability of the EU ETS to additional climate action is evident from the second and third sentences of Article 1: “*This Directive also provides for the reductions of greenhouse gas emissions to be increased so as to contribute to the levels of reductions that are considered scientifically necessary to avoid dangerous climate change. This Directive also lays down provisions for assessing and implementing a stricter Community reduction commitment exceeding 20 %, to be applied upon the approval by the Community of an international agreement on climate change leading to greenhouse gas emission reductions exceeding those required in Article 9, as reflected in the 30 % commitment endorsed by the European Council of March 2007.*”

⁶³ For a discussion, see Nicolas Barber, ‘The Limited Modesty of Subsidiarity’ (2005) 11 *European Law Journal* 308.

⁶⁴ As Schütze puts it, the EU has constitutionalised the philosophy of cooperative federalism through the principle of subsidiarity and complementary competences where the Union and Member States are complementary parts of a single government mechanism intended to realize practical problems. Robert Schütze, *From Dual to Cooperative Federalism: The changing structure of European Law* (Oxford: OUP, 2009), pp. 242 – 286.

incorporation of the principle in European law is an opportunity to consider ‘relationship between the EU institutions, between the EU institutions and Member States, between the EU institutions and citizens, and between the European institutions and external parties’⁶⁵ with a view to ‘better’ achieve common objectives. In this regard, I will suggest that unlike PCT scholars who assume the value of ‘local governance’ or ‘individual engagement’, the achievement of emissions reductions vis-à-vis individuals and households requires an understanding of the prevalence of the EU in climate governance as well as relaxing a static view of the individual or household as the smallest (and therefore the most appropriate) unit in regulating emissions from consumption.

A. The Prevalence of the EU in Competence Allocation

i. Institutional Preference for Iterative Governance

Despite the possibility of restrictions on the nature of climate action Member States may take due to the operation of the EU ETS, it would be hasty to conclude that there is necessarily a conflict between Article 193 TFEU and Article 1 of the EU ETS Directive. The common refrain in the ECP is that the EU and Member States need to work together. This is because climate change is a strange beast that demands ‘climate exceptionalism’⁶⁶ in two senses: firstly, there is a joint responsibility for the EU and Member States to achieve international climate obligations;⁶⁷ second, it could be argued that given the ‘super-wicked’ problem⁶⁸ of climate change, Member States have conferred upon EU institutions exceptional powers to look after climate change on

⁶⁵ Josephine van Zeben, ‘Subsidiarity in European Environmental Law: A competence allocation approach’ (2014) 38 *Harvard Environmental Law Review* 415, p. 422.

⁶⁶ See Chris Hilson, ‘It’s All About Climate Change Stupid! Exploring the relationship between environmental law and climate law’ (2013) 25:3 *Journal of Environmental Law* 359.

⁶⁷ For a review, see Andre Nolkaemper, ‘Joint Responsibility of EU and Member States for non-performance of obligations under multilateral environmental agreements’ in Elisa Morgera (ed.) *The External Environmental Policy of the European Union: EU and International Law perspectives* (Cambridge: CUP, 2012), p. 304.

⁶⁸ Richard J. Lazarus, ‘Super wicked problems and climate change: restraining the present to liberate the future’ (2008) 94 *Cornell Law Review* 1153.

their behalf.⁶⁹ Subsequent to such conferral, the EU's climate package appears to be a set of constituent instruments that precludes Member States from taking certain actions.⁷⁰ Such action relates to climate change specifically both with respect to distribution and implementation, and in relation to the EU legal order generally, as the objectives of preserving the stability of the internal market and competition need to be satisfied. This could be viewed as a *lex specialis* argument supported by climate exceptionalism. Thus, 'working together' has its legal limits. This view predicated on Member States and EU institutions as composite and separable entities is a conventional positivist view, and does not reflect either the political economy of climate change or the way European governance functions. Both EU governance and the political economy of climate change could be said to function by way of *iteration*.

Iteration in an altruistic experimental sense would mean 'learning by doing': complex issues demand changes, negotiations and improvements to initial allocation and implementation, with constant and periodic input by stakeholders. The EU has advertised this mode of administrative governance as the preference for *experimentalist governance*⁷¹ and *smart regulation*. The preference for learning by doing is supported by a governance method is best articulated by Sabel and Zeitlin: "[autonomous units of implementation] must report regularly on their performance, especially as measured by the agreed indicators, and participate in a peer review in which their results are compared with those pursuing other means to the same general ends. Finally, the framework goals, metrics, and procedures themselves are periodically revised by the actors who

⁶⁹ This reflects the Razian Normal Justification Thesis discussed in Section III (A), Chapter 3., where the Member States have conferred power onto the EU to achieve ends that they have comparatively inadequate means to pursue. For a discussion on the use of this thesis in relation to international law, see Samantha Besson, 'The Authority of International Law – Lifting the State Veil' (2009) 31 *Sydney Law Review* 343. Notwithstanding views on the extent to which European Law is a species of international law, the use of the 'service conception of authority' can be applicable to European Law as well; the exception being that European citizens along with Member States have a legitimate claim in deciding on their ends in addition to Member States as representative collectives.

⁷⁰ This is the corollary to the Razian Pre-emption Thesis discussed in Chapter 3, III (A)., where the conferring party is pre-empted from raising some argument against the authority to which some powers have been conferred.

⁷¹ For a review, see Sabel and Zeitlin, 'Learning from Difference', *supra*.

initially established them, augmented by such new participants whose views come to be seen as indispensable to full and fair deliberation."⁷² The EU's preference for handling the technical and administrative complexity of experimental governance appears to be rooted in its 'justificatory capital'; i.e. in the wake of several claims regarding the 'democratic deficit' of EU institutions, the EU has famously adopted governance through reason as 'a reaction to the destructive force of politics' eroticism.⁷³ The EU reasons out its use of expertise and has several stages of review of expertise; the same cannot be said for all Member States of the EU. More than three thousand experts are engaged by the Commission – the body that suggests new regulation and collects intelligence - that assist with technical inquiries.⁷⁴ Further, the Commission has attempted to reason out its use of expertise. Notably, in a 2001 White Paper on European Governance⁷⁵ followed by a 2002 Communication with Guidelines⁷⁶ the Commission sought to articulate its position on 'the collection and use of expert advice,' where expertise included 'in-house' and 'external experts.' Moreover, given the several processes of review of the Commission's output by the Council, the Parliament, and the possibility of judicial review, there seems to be a robust system of regulatory oversight built into EU decision-making; this may mitigate the possibility of discursive capture of expertise discussed in Chapter 5. Thus, the EU regulatory architecture seems poised to deal with ferreting out the administrative complexities of climate regulation.⁷⁷

⁷² Sabel and Zeitlin, 'Learning from Difference', *supra*, p. 274.

⁷³ Ulrich Haltern, *Pathos and Patina: The Failure and Promise of Constitutionalism in the European Imagination* (2003) 9 *European Law Journal* 14, p. 19.

⁷⁴ The Commission maintains a Register of Expert Groups and Other Similar Entities at <http://ec.europa.eu/transparency/regexpert/index.cfm>. If we consider 'informal experts' engaged by all Directorates General, then the number may well exceed twelve thousand experts. Mark Field, 'The Anatomy of EU Policy-making: Appointing the experts' in Ariadna Ripoll Servent et. al. (eds.), *Agency And Influence Inside The EU Institutions* (Vienna: Österreichische Gesellschaft für Europaforschung, 2013), pp. 1–19.

⁷⁵ European Commission, *European Governance – A white paper* COM(2001) 428

⁷⁶ European Commission, *Communication from the Commission on the collection and use of expertise by the Commission: Principles and guidelines* COM (2002) 713.

⁷⁷ Climate regulation is one notable instance of the 'European administrative space'. For a general overview, see Herwig C. H. Hoffman, 'Mapping the European Administrative Space' (2008) 31 *West European Politics* 662.

Iterative experimentalist governance seems to capture the way the EU ETS functions; the fact that there are phases of the system, and the fact that the method of allocation has changed from grandfathering to auctioning clearly seems to suggest that the EU ETS is a good example of learning by doing. It is easy to ignore, however, that iteration takes place within institutional parameters. The effectiveness of the EU ETS is contingent on the free movement of allowances (and related services) that the EU is institutionally poised to deal with; the price stability and efficiency of the EU ETS could be reasonably safeguarded given such an institutional arrangement. Further, given one of the primary components of the ‘command-without-control’⁷⁸ nature of the EU ETS is the tradability of allowances in primary and secondary markets, the EU’s general regulatory architecture towards dealing with economic flows may lend itself towards an enabling administrative framework for flexibility mechanisms dealing with climate change.⁷⁹ For iteration to accommodate regulatory innovation, there needs to be complementarities with current EU climate governance. This would apply to climate regulation irrespective of the level of design and implementation. If we were to relax the altruism assumption, the ‘learning by doing’ would be premised on the distributive choices that constitute institutional memory. Drawing on Chapter 5 and Sections I and II above, EU climate governance is premised on the ‘market-based liability’ of some industrial actors, where both the preference for a market-based approach as well as inclusion of some industries is the result of tussles between different interests. The language in which the ‘agreed indicators’ of EU climate regulation is understood and improved upon is tethered to such preferences, and the agents who put such preferences into effect. Notwithstanding oversight mechanisms that may

⁷⁸ This characterisation is because the EU ETS combines the property of regulatory control over the emissions quotas that satisfy the ‘cap’ component and the absence of control with regard to how parties may satisfy the cap. Stefano Clò, *European Emissions Trading in Practice: An Economic Analysis* (Cheltenham: Edward Elgar, 2011), p. 62.

⁷⁹ Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC [2004] OJ L145.

prevent the prevalence of discursive capture, radical institutional change would be difficult.⁸⁰ It is within such institutional preferences that the EU's smart or better regulation⁸¹ operates; EU institutions seek to adopt regulation to relieve Member States of administrative burdens.

It seems likely, therefore, that climate policies at the Member State level that are informed by different preferences, interests and indicators would be pre-empted due to the high co-ordination costs (or administrative dissonance, as it were) with the current EU framework. In other words, it appears that the path dependence of EU climate governance to the EU ETS specifically, and towards a market mechanism of dealing with industrial emissions generally would entail a selective appreciation of 'externalities, heterogeneity, economies of scale and scope'⁸² in climate regulation. If yes, then perhaps in the interest of managing administrative costs, it would make sense for Member States to implement non-ETS targets by developing instruments that do not conflict too much with the distributive and discursive preferences that inform the EU ETS.

In addition to the above, there is yet another aspect of the European polity that bears on any federal arrangement chosen with respect to climate regulation, and that is the way aspects such as freedom, privacy and responsibility of private parties are legally constructed. Even in the absence of the vertical applicability of the European Convention of Human Rights (ECHR) in individual cases, the prevalence of horizontal governance and discursive influence plays a role in Member State appreciation of private

⁸⁰ Scholars have argued that the use of expertise is moderated by the normative signifier of establishing the internal market, the democratic deficit in conducting expert inquiry, and the dissonance between expert inquiry and the expressive capacity of civil society. For a full discussion, see Roy, 'Mediators and Moderators of Normative Reductionism'; *supra*, Section II. Thus, the current position seems to be that the EU regulatory architecture is well placed to deal with 'learning by doing', but the learning operates within institutional and discursive constraints.

⁸¹ The Commission's Smart Regulation or Better Regulation approach can be found at: https://ec.europa.eu/info/law/law-making-process/better-regulation-why-and-how_en

⁸² These are the primary factors identified by van Zeven with regard to the determinants of competence allocation in EU climate regulation. Josephine Van Zeven, *The Allocation Of Regulatory Competence in the European Emissions Trading Scheme* (Cambridge: CUP, 2014), p. 90.

engagement.⁸³ This is discussed more fully with respect to the proportionality of EET regulation in Chapter 7. For now, it is sufficient to mention that the institutional regulation of private parties in the European polity is not based on static normative moderators, but on federal iteration: as Mattias Kumm points out, the constitutional structure of European federalism is also based on iteration by Member State institutions, primarily domestic courts and the parties who negotiate their interests through such courts.⁸⁴ Some parties and courts influence the substance of European law, and this substance in turn becomes applicable to all Member States and citizens residing therein. Thus, the fabric of European federalism influenced by iteration and incremental learning by doing – rather than static claims to centralisation or decentralisation – is the base on which new climate regulation will be woven. It would be far more cost-effective for any party to transact within such federal parameters, unless they have the capacity to bring about fundamentally redistributive changes into the federal sphere.⁸⁵

ii. EU's Interest in Competition and Leakage

There is one issue regarding the internal market that features in EU climate policy, and which could be said to colour the practice of subsidiarity: leakage.

⁸³ See Discussion in Section IIA, Chapter 7. In *Urgenda*, the Hague District Court found European Court of Human Rights jurisprudence to be persuasive without explicitly relying on European Convention on Human Rights provisions. For a recent review of the debates in which the horizontal effect of the ECHR can be found in European and Member State law, see Mary Arden, *Human Rights and European Law: Building new legal orders* (Oxford: Oxford University Press, 2015), 224-225.

⁸⁴ Mattias Kumm, 'Constitutionalism and Experimentalist Governance' (2012) 6 *Regulation and Governance* 401.

⁸⁵ In the US, the State of California has arguably been able to redistribute the climate regulatory framework vis-à-vis the motor vehicles industry, and also being a first mover in a possible trade-based federal climate policy. Ann Carlson, 'Iterative Federalism and Climate Change' (2009) *Northwestern University Law Review* 1097. As discussed in Chapter 5, the UK – and notably some industrial actors within the UK – have had a strong influence on EU climate policy. However, it would be presumptuous to say that the UK exclusively mediates the iterative regulation of climate change in the EU. The framework of market-oriented producer-based liability informed by international regulation would certainly play a part as discussed in III.A (iii) below.

The idea of leakage assumes centrality in both international and EU climate regulation. The IPCC defines carbon leakage as “The increase in CO₂ emissions outside the countries taking domestic mitigation action divided by the reduction in the emissions of these countries.” Mitigation regulation may lead to high carbon prices; the EU can therefore affect emissions globally as industries may relocate to other jurisdictions where there is no carbon price. Thus, EU policies may amount to a redistribution of emissions among nation-states globally and even internally within Member States of the EU. The importance of the effects of leakage internally gains currency due to another factor: the competitive edge enjoyed by industries inside and among Member States of the EU. This is why the way leakage is understood in the EU is inevitably informed by the idea of the economic implications for industries; the EU ETS Directive, for instance, mentions that the reason why other nation-states should have carbon prices is because if they don’t, then “*this could lead to an increase in greenhouse gas emissions in third countries where industry would not be subject to comparable carbon constraints (carbon leakage), and at the same time could put certain energy-intensive sectors and subsectors in the Community which are subject to international competition at an economic disadvantage.*”⁸⁶ Thus, the concern is as much the risk of relocation of production and investment (termed production and investment leakage) as a potential increase in global emissions. Integral to production and investment leakage are *carbon price* and *carbon costs*,⁸⁷ to which we now turn.

The carbon price is the EU-level price that needs to be internalised by units that are liable for the reduction of emissions; in the EU the carbon price is set by the EU ETS. Policies at the EU and Member State Level such as energy efficiency standards or fuel standards or additional climate change policies may affect the *carbon costs* of some producers in the Member State. This can result in the producers becoming greener and thus reducing the demand for allowances. If this happens, then there might be a decline in the robustness of the carbon market. This in turn may lead to a drop in the carbon price of allowances in the EU ETS. Alternatively, the producer bearing

⁸⁶ Recital 24, EU ETS Directive.

⁸⁷ For a discussion, see Andrei Marcu, Christian Egerhofer, Susanna Roth and Wijnand Stoefs, ‘Carbon Leakage: An overview’, CEPS Special Report No. 79, December 2013.

higher costs may decide to relocate to another Member State within the EU that does not have such stringent climate policies. If this happens, then there is the potential for what has been called ‘the waterbed effect’, where emissions are displaced from one Member State to another. Notwithstanding arguments against Member State climate policies in addition to the EU ETS on the ground that the waterbed effect would come into play,⁸⁸ there is no evidence yet to suggest that the waterbed effect would adversely affect the carbon price EU ETS or cause carbon leakage.⁸⁹ Having said that, the EU has an interest in maintaining a carbon price that avoids external leakage, as expressed in Recital 24 of the EU ETS Directive. This is done through border tax measures. Member States that are economically dependent on sectors that have a high propensity to leakage would be incentivised to contain leakage within the EU or internationally due to the revenue accrued from the industrial actors within such sector. Given the history of the EU ETS and challenges made by different sectors, it appears that the Commission is not persuaded by the competitive disadvantages of leakage.⁹⁰ The same applies to the CJEU where comparative competitive disadvantage of some sectors is not considered to a violation of equal treatment.⁹¹ It could further be said that the adoption of the auctioning of allowances in Phase III was adopted despite a substantially enhanced risk of leakage.⁹² In contrast, grandfathered allowances had the

⁸⁸ See for instance Ted Thurlings, ‘Nederland en de EU lopen juist voorop in het reductiebeleid’, *Volkskrant*, June 26, 2015, available at: <http://www.volkskrant.nl/ opinie/nederland-en-de-eu-lopen-juist-voorop-in-het-reductiebeleid-a4089206/>.

⁸⁹ “Whether this so-called ‘waterbed effect’ of EU wide emissions trading implies a stimulus (the emission-saving Member State can make a financial profit by selling) or even a barrier to further going national climate targets remains to be seen. After all, if a Member State with a national target which is stricter than the EU sells its emission right to a country which then accordingly will have additional emissions, the total EU emissions will not decrease. Whether hence the possibility of trading among Member States serves as an incentive or not for further going national policies, remains to be seen.” Marjan Peeters, ‘Climate Law in The Netherlands: The Search towards a National Legislative Framework for a Global Problem’ (2010) 14(3) *Electronic Journal of Comparative Law* 1, p. 14.

⁹⁰ Okereke and McDaniels, *supra*.

⁹¹ See the discussion on *Arcelor* in Chapter 7.

⁹² Susanne Dröge, ‘Carbon Pricing and its Future Role for Energy-intensive Industries’, Climate Strategies Report, March 2013, p. 10 and p. 17.

promise of keeping a check on leakage owing to the possibility of passing through costs to consumers; theoretically, if an installation in an industry could pass through all its costs to its consumers, then there should not be a competitive disadvantage. In other words, a carbon price poses less of a leakage threat if the cost burden to meet the carbon price can be shifted. While auctioning may lead to an enhanced risk of leakage, it enhances the potential for low carbon innovation.⁹³ Thus, the primary objective of the EU ETS in reducing emissions cost-effectively – is given priority to secondary objectives, including the bearing of additional costs and foregoing the enjoyment of additional benefits (as discussed in Section II.B).

To come back to the *Iberdrola* judgement, the reasoning of the CJEU that pass-through is not prohibited but at the same time not essential for reducing emissions indicates that the EU is concerned about competitive concerns, but that at the same time does not appear to consider competitive concerns in general and leakage in particular as the primary informant of subsidiarity in relation to climate change. Rather, subsidiarity is characterised by the liability-based⁹⁴ market mechanism of the EU ETS.

iii. The EU Preference for a Producer-Based Model

Steininger et. al. have argued that the difficulty of carbon leakage can be better addressed through a ‘consumption-based model’ of carbon accounting and carbon responsibility.⁹⁵ This would imply that the embodied carbon in goods would be accounted for if the final consumer is held responsible for the emissions incurred along the supply chain. This would also handle the leakage problem as

⁹³ Ingmar Juergens, Jesús Barreiro-Hurlé, and Alexander Vasa, ‘Identifying carbon leakage sectors in the EU ETS and implications of results’ (2013) 13 *Climate Policy* 89, p. 100. Ralf Martin, Mirabelle Muûls and Ulrich Wagner, ‘Climate Change, Investment and Carbon Markets and Prices – Evidence from manager interviews’, *Climate Strategies, Carbon Pricing for Low-Carbon Investment Project*, 2011.

⁹⁴ The quantity-based fixed cap is the moderator that characterises EU climate regulation as discussed in Section IIIC of Chapter 3. This fixed cap is implemented by properties that amount to a liability mechanism as discussed in Section IV.C (iii) of Chapter 5.

⁹⁵ Karl Steininger, Christian Lininger, Susanne Droege, Dominic Roser, Luke Tomlinson and Lukas Meyer, ‘Justice and Cost-effectiveness of Consumption-based versus Production-based Approaches in the case of Unilateral Climate Policies’ (2014) 24 *Global Environmental Change* 75.

the consumer would not differentiate among producers in relation to the goods they consume. Issues such as emissions lost in international transport would also be accounted for. This is the theoretical basis for a global carbon tax where all individuals would bear equal responsibility against a benchmark. However, this is not the way responsibility is understood under the UNFCCC, and this is also not the way responsibility is understood by the EU. Importantly, when the international architecture on responding to climate change was being put into place, emissions were inventoried and ‘fair accounting’⁹⁶ was done by the IPCC with the producer in mind.⁹⁷ Carbon accounting in the EU – as is manifested in carbon inventories for monitoring and reporting – is based on the production of goods and energy in Member States⁹⁸ above a certain threshold: these are the ‘direct sources’ of emissions accounted for. The Community Independent Transaction Log (CITL) database- the go-to point for transparency regarding the units covered, monitored, and allowances transacted - contains information only on activities of installations above the threshold mentioned in the EU ETS Directive. Smaller installations are excluded for all purposes. Further, the logic behind the secondary objective of energy efficiency is that marginal abatement costs may be reduced by installations investing in cleaner technologies. The core of EU climate regulation – assignment of liability, pricing through a market and MRV of installations – is a producer-based territorial model. The territoriality is restricted to Member States; this is also why carbon leakage is a problem only with respect to production leakage and investment leakage, as that would compromise the internal market. This does not mean that consumer-based emissions cannot be accommodated: the ‘baseline-and-credit’ mechanisms are essentially consumption-based approaches, including the CDM. However, as is well known, the inclusion of baseline-and-credit mechanisms are tolerated as long as they do not have an adverse effect on carbon pricing, or interfere with the fixed cap that moderates climate action.

⁹⁶ The idea that carbon accounting is not a technical exercise but qualified by fairness is worth noting. Simone Bastianoni, Federico Maria Pulselli and Enzo Tiezzi, ‘The Problem of Assigning Responsibility for Greenhouse Gas Emissions’ (2004) 49 *Ecological Economics* 253, p. 254.

⁹⁷ IPCC, *Guidelines for National Greenhouse Gas Inventories* (London: IPCC, 1996).

⁹⁸ Glen P. Peters and Edgar G. Hertwich, ‘Post-Kyoto Greenhouse Gas Inventories: Production versus consumption’ (2008) 86 *Climatic Change* 51.

The producer-based territorial model of regulating emissions is not necessarily damaging to the economic interests of the EU; and this could explain why there is an overlap of international carbon accounting models and the ‘federal market’⁹⁹ of the EU. Essentially, higher environmental standards do not necessarily lead to economic disadvantages, provided there is a high level of economic interdependence.¹⁰⁰ Though there might be resistance from individual firms or industries (as discussed in Section IV of Chapter 5), there is an incentive for affluent countries to require other countries to adopt stringent environmental policies to reap competitive advantages.¹⁰¹ A higher level of environmental protection and economic advantage is intimately connected to an open economy with firms as leading actors. Thus, though there may be opposition by individual firms or industries or even countries in adopting mechanisms such as a carbon tax, a cap on emissions may work due to the participation of firms in an interdependent market without adversely affecting the economy of the EU. This also provides the impetus for the EU to influence the creation of an international carbon market by linking EU ETS-equivalent systems; which in turn would alleviate the problem of investment and production leakage.

The conclusion we can arrive at in relation to the exercise of powers within the EU is – if additional emissions reductions may be achieved by way of an alternative that is not only compatible but approaches strict conformity with the EU ETS, then such an alternative will be certainly be preferred to one that conforms less. The principle of shared competence with respect to climate regulation may be described as *exhaustion of EU ETS equivalent measures*. This does not mean that non-EU ETS measures are precluded; we cannot arrive at the conclusion that any and all climate measures (that bear the promise of additional emissions reductions) that are not compatible with the EU ETS are unlawful. This brings us to the question: is an EET equivalent to the EU ETS?

⁹⁹ The phrase is borrowed from Schuetze. Robert Schuetze, *From International to Federal Market: The changing structure of European Law* (Oxford: OUP, forthcoming).

¹⁰⁰ See David Vogel, ‘Environmental Regulation and Economic Integration’ (2000) 3 *Journal of International Economic Law* 265.

¹⁰¹ *Ibid.* This is only one of the reasons discussed by Vogel as to why stringent environmental regulation might coincide with the EU’s aim of creating and maintaining a robust internal market.

B. Regulating the End-user: Double-Counting, the Polluter Pays Principle and the Least Cost Avoider

From the above, it appears that EU regulation influences all aspects of carbon accounting, liability and administration. It was also suggested in Chapter 5 that there appears to be a ‘desirable path-dependence’ in the EU ETS that would be absent in a new mechanism, that involves new stakeholders. This is at odds with the common refrain that the individual or household should be regulated at a more local level. Further, the EU ETS seems well suited to facilitate (and hold liable) installations. How could the end-user fit into this framework? I seek to argue in this section that following the distributive and efficiency rationale of the EU ETS, the *climate end-user is not necessarily an individual or a household*. To make this point, I need to take several steps back, all the way to the first assumption in Chapter 2.

In Chapter 2, I argued that the residential sector has substantial untapped emissions. And the same may be said for the various activities that I sought to introduce within an EET including consumption of food, waste disposal and private transport. The need to engage the individual or the household sector seems obvious given this requirement. From Fig. 5 on Sources of Emissions earlier in this chapter, it appears that all of these are sources of emissions. However, all of the activities that are related to the consumption of electricity and fuel could be viewed as existing or potential indirect sources of emissions. To have an EET together with a system as the ETS would therefore lead to a *double counting* problem. In relation to other activities as well such as the consumption of food, there is a choice made to attribute emissions to the final consumer; there is in effect an *assignment of liability to the consumer for the emissions incurred along the supply-chain*. The idea of ‘the end-user’ as a discrete source in the light of double-counting and assignment of liability needs clarification.

The way Double Counting (‘DC’) has been thought about in relation to the PCT by scholars¹⁰² as well as by organisations that provided expert testimony in the PCT Report is in relation to overlaps in the EU ETS and

¹⁰² Brohe, ‘Personal Carbon Trading in the context of the EU Emissions Trading Scheme’, *supra*, p. 173.

a cap-and-trade system for individuals/households. The Tyndall Centre, for instance, is of the opinion that there would be a ‘very considerable degree’ of DC.¹⁰³ This is echoed by Starkey who finds that there would be a ‘very, very considerable amount’ of DC given the EU ETS and the possibility of developing a policy mechanism in relation to additional emitters such as gas suppliers and fuel suppliers.¹⁰⁴ Fawcett observed: “I am not entirely clear in my own mind how important it [DC] is.”¹⁰⁵ After considering the evidence, the PCT Report observes that DC is not an insurmountable problem, provided that the PCT and EU ETS ‘operate side by side’¹⁰⁶ with different currencies.¹⁰⁷ Unless there is clarity on how the two systems can be fused without difficulty (and to my mind there seems to be no evidence to that effect), then DC is a problem. If the intention is to expand the EU ETS to the household, then DC is indeed a serious problem, as the intention behind such expansion is not two separate currencies and systems operating ‘side by side’. The practical solution advocated by Sorrell to solving the problem of DC – conceptualised as the simultaneous operation of a separate trading scheme for the end-user – is to institute two separate systems with different currencies and find mechanisms for fungibility of the two currencies prevalent in the two systems.¹⁰⁸ Sorrell is probably the scholar who has investigated the issue of DC most extensively among those consulted for the PCT Report. While the EU ETS was being conceived in 2003, Sorrell had studied the issue of DC in relation to the Renewables Obligation and the Energy Efficiency Commitment that existed in the UK prior to the onset of the EU ETS. He had observed that though there might be a ‘double crediting’ of an abatement in the three systems, the EU ETS cap, the Renewables targets or the energy efficiency target may not be

¹⁰³ PCT Report, p. 15.

¹⁰⁴ PCT Report, p. 30. It may be noted that Starkey includes ‘suppliers’ as a separate category of emitters, thus indicating that various points on the carbon chain are overlooked in the concentration on producers and consumers.

¹⁰⁵ PCT Report, p. 69.

¹⁰⁶ Ibid.

¹⁰⁷ Testimony of Matt Prescott in this regard is accepted by the House of Commons. PCT Report, p. 64.

¹⁰⁸ Sorrell’s uses ‘fungibility’ in the sense of rendering units from different trading systems equivalent. It is analogous, for instance, in making CDM credits equivalent to EU ETS allowances.

undermined, but concluded that calculating the total abatement of the three mechanisms without intersections would probably lead to an overestimation of abatement.¹⁰⁹

Welfare would be compromised if a DC translates into a double crediting – a consumer may have to pay twice for the same unit of carbon. This would of course be in addition to the administrative costs incurred in having multiple regulatory mechanisms, or the problem of ‘double regulation’. A yet more compelling problem is *de facto* effectiveness, as DC might inflate actual mitigation. The problem with DC, as Sorrell puts it, is if a single abatement action is counted more than once. This would be a problem as there would potentially be an overestimation of the amount of emissions mitigated. If the primary proxy for the effectiveness of a climate policy is the satisfaction of climate targets, then the targets would be met sooner with an ‘accounting inflation’. In other words, a quantity mechanism proxied through the satisfaction of a climate target would not correspond with actual abatement. Effectiveness, therefore, may be satisfied through an underestimation of actual abatement.

How are we to deal with the above problem? Practically, a solution would lie in devising methods of finding equivalence (similar to Sorrell’s ‘fungibility’) between different policies or segments of a policy. Additionally, taking a cue from the MRV Requirements of the EU ETS, segregating components of emissions at every stage would be an option. In relation to industrial activities, installations have to bear the transaction costs of segregating direct and indirect emissions sources.¹¹⁰ However, in the event segregation is too costly or not possible, then we need to consider whether something like a PCT policy needs to be in place at all. If there is indeed a conflict between accounting for abatement at different stages of the carbon chain such as an

¹⁰⁹ Steven Sorrell, ‘Who Owns the Carbon? Interactions between the EU emissions trading scheme and the UK renewables obligation and energy efficiency commitment’ (2003) 14 *Energy and Environment* 677, pp. 692 – 694.

¹¹⁰ The process of Monitoring Reporting and Verification requires the internalisation of various risks by operators such as ‘Detection Risk’ and ‘Verification Risk’, as is evident from the Guidance Document. Commission, ‘Guidance Document The Monitoring and Reporting Regulation – Data flow activities and control system’, MRR Guidance document No. 6, 17 October 2012, p. 15.

industry and an individual, there needs to be a mechanism for regulatory target identification. There should, therefore, be a basis for identifying climate regulatory targets. This exercise becomes crucial not only because achieving clarity about identification as an end in itself, but identification leads to liability for climate change action. And per Calabresi, the assignment of liability is an essential component of efficiency. Thus, *identification of a 'source' is integral to distribution of liability for climate action and cost-effectiveness of climate regulation*. It could be argued that this exercise is not too difficult – the individual (and the household) is responsible for emissions, and therefore should bear responsibility. However, as indicated in Chapter 1, the structure of the carbon economy makes the identification of a source more complex.

Intuitively, it would make sense to hold all individuals responsible for climate change as they are the (final) consumers of energy directly, as well as the consumers of products that involve the release of harmful gases into the atmosphere. I would, however, like to suggest that this is a compelling view of consumption, but not the only view. One of the central insights of BLE is that individual behaviour is constrained by factors that are beyond their deliberative control.¹¹¹ Thus, when a consumer makes a decision about what to buy, they are subject to influence by producers, the media, pressure groups, etc. Drawing on this insight, it could be said that there is no *a priori* assumed responsibility of individuals for their acts of consumption.¹¹² Simply put, the formulation of preferences takes place in an institutional context.

One way of thinking about consumption is the purchase and use of goods and services by consumers. Another way of thinking about consumption is the totality of processes that involve the exploitation of resources that result in their depletion or alteration; or as the biologist Norman Myers puts it, the 'human transformation of materials and energy.'¹¹³ With regard to the first, there is an attribution of responsibility on final consumers for the process of consumption. This amounts to a determination of causality and would feed

¹¹¹ Sunstein and Thaler, 'Libertarian Paternalism is not an Oxymoron', *supra*.

¹¹² This is indeed the guiding assumption of the MiFID Directives in the EU post the financial crisis.

¹¹³ Norman Myers, 'Consumption: Challenge to sustainable development...or Distraction?' (1997) 276 *Science* 53 – 57.

into holding individual consumers negligent or liable for being polluters. With respect to the second, there is no pre-determined attribution for the processes that are involved in the consumption of resources. This conceptualisation is in tune with the picture of carbon history sketched in the initial pages of this book: the naturalisation of fossil-fuel lifestyles is informed by the exploitation of coal, the related invention of the steam engine, the discovery of oil and regulatory incentivisation of the manufacture and enjoyment of fossil fuel-based products such as private automobiles.¹¹⁴ In this account responsibility can be attributed to neither producers nor consumers, but rather the institutional structure of the carbon economy as a whole.

The statement 'we are all responsible for what we consume' could equally well include the producers of fuel and automobiles, the advertisement agencies that have created a fossil fuel economy, or the final consumer. There is no undisputed way to define a consumer or unit that is 'really responsible' for climate change. From this, I suggest that the end-user can therefore be any unit that is part of the consumption ecosystem. *The end-user is therefore a construct that is best placed to deal with climate change.* Drawing on the taxonomy of direct and indirect sources of all activities, the end-user may be conceptualised as follows: First, for emissions that are to be double-counted, it is the least-cost avoider placed at any point on the carbon chain. Secondly, for emissions that are not double-counted – or if is possible to perfectly segregate direct and indirect sources – it is the source that directly contributes to emissions. Following this reasoning, two possible propositions for assignment of liability are:

1. When there is double counting, the individual or household is not liable as they are not the least-cost avoiders.
2. When there is no double counting, the individual or household may be liable as they are direct sources of emissions.

In relation to the first, the assignment of liability should be on the least-cost avoider (per Calabresi) or the 'most advantaged' (per Caney). If the least-cost avoider (say the producer of fuel) is unwilling to bear all costs, they would

¹¹⁴ See Chapter 1, Section I. C.

pass-through the costs to the consumer. Following Caney, even such costs should not be passed through to the ‘least advantaged’.¹¹⁵ Caney’s argument may have an effect on efficiency if consumers are unwilling to undertake carbon-neutral activities if they are aware of the fact that they are bearing burdens on behalf of other agents in the carbon chain.

Having said that, I would like to put forward three categories of costs: (i) The costs of segregating, monitoring, reporting and verifying direct and indirect emissions from households, and (ii) the costs of differentiating among households (either on the basis of a benchmark or otherwise) for the purpose of assigning liability, and (iii) the costs of implementation through a bargain-based trading mechanism. The European Environment Agency (EEA) Report on End-user Emissions from Energy¹¹⁶ provides a method of assessing emissions from households. The assessment is based largely on the UK ‘end-user model’¹¹⁷ that makes a distinction between combustion and fugitive emissions and identifies the end-user not as an autonomous source, but a *reallocated* source. There is no basis, provided, for how this reallocation happens. Drawing on the shift in liability to individuals, *this reallocation would amount to redistribution*, and the basis for undertaking this redistribution appears to be political reasons (such as public choice concerns discussed in Chapter 5) or a value-based idea of individual responsibility for emissions. Following this, I would like to forward a third proposition:

3. The End-user with respect to all sources for the purpose Climate Regulation is the Least Cost Avoider and the Most Advantaged.

I am aware that this categorisation of the ‘end-user’ is at odds with the way the end-user is understood in energy-efficiency regulations, or in the assessment

¹¹⁵ See discussion on Caney and Calabresi in Section I. B. (ii) of this chapter.

¹¹⁶ European Environment Agency, ‘End-user GHG emissions from Energy: Reallocation of emissions from energy industries to end users 2005–2009’, *EEA Technical Report Number 19*, December 2011.

¹¹⁷ The reader may note a practical application of iterative federalism discussed earlier where a model of reallocation of emissions developed by a UK agency provides the basis for calculating end-user emissions at an EU level, which then becomes the baseline for all Member States. See discussion in Section III. A. (i) of this chapter.

of end-user emissions.¹¹⁸ Such re-categorisation also seems to bring into play the possibility of other desirable re-categorisations. Take for instance Michael Vandenberg's re-categorisation of Demand-side Management to Net Demand Reduction. Vandenberg has been a prolific advocate on the need to reduce emissions from individuals. Unlike some of the scholars discussed earlier (Mitchell, Prinsen) and albeit without addressing the issue of double counting, he takes it for granted that the individual is a discrete source of emissions,¹¹⁹ and therefore sees the need to reduce emissions from individuals. Keeping this requirement in mind, Vandenberg addresses how this could be done, and among other proposals such as informational tools to guide behaviour,¹²⁰ he (along with Jim Rossi) suggests the need to reduce energy demand. In this regard, he studies the American electricity sector and concludes that the preference for Demand-side Management as the preferred category of attaining energy efficiency provides perverse incentives to distribution utilities to not only avoid demand reduction, but also to refrain from taking mitigation measures.¹²¹ This is because Demand-side Management focuses on shifting the timing of the demand from peak to non-peak periods, and not on total demand. This *“allows utilities to fully deploy their lowest-cost sources of power, while under-deploying or under-investing in higher-cost sources, including renewable energy...utilities have generating units standing by to provide the additional electricity necessary at peak times. These ‘peaker’ units are often natural gas turbines that are more expensive to operate than the coal-fired units that supply*

¹¹⁸ The approach taken in the EEA Report discussed above is in conformity with the idea that the end-user is the final consumer. The phrase ‘end-use’ is generally associated with ‘residential’ or ‘buildings’. See for example, European Commission, *Good Practice for Energy Efficiency*, available at: https://ec.europa.eu/energy/sites/ener/files/documents/good_practice_in_ee_web.pdf. Other organisations also use the terms similarly: <https://www.c2es.org/technology/factsheet/ResidentialBuildingEnd-Use>; http://www1.udel.edu/igert/pbl_course/Team%20Simple%20Green%20WP%20Problem%201.pdf.

¹¹⁹ For a snapshot of his work, see Michael Vandenberg and Benjamin K. Sovacool, ‘Individual behaviour, the Social Sciences and Climate Change’ in Daniel Farber and Marjan Peeters eds. *Climate Change Law* (Edward Elgar, 2016), pp. 94.

¹²⁰ Michael P. Vandenberg, ‘From smokestack to SUV: The individual as regulated entity in the new era of environmental law’ (2004) 57 *Vanderbilt Law Review* 515.

¹²¹ Michael P. Vandenberg and Jim Rossi, ‘Good For You, Bad For US: The financial disincentive for New Demand Reduction’ (2012) 65 *Vanderbilt Law Review* 1527.

*base load electricity.*¹²² Thus, Demand-side Management has the potential to ‘increase total carbon emissions from electricity generation.’ The solution, therefore, is to shift the focus to incentivising Net Demand Reduction. In this regard, Vandenberg and Rossi observe that the focus of incentives and responsibility should be the utilities distributors and not households, the reason behind which I need to reproduce at length:

*“Retail electric distributors, both public and private, interact regularly with consumers, and they control much of the flow of information to and from households and the access to opportunities for demand reduction. They can act aggressively to induce widespread adoption of new practices and more efficient equipment. Or they can conduct widely-publicized programs that comply with applicable mandates and generate goodwill without actually generating major reductions in demand. In addition, by controlling access to information and connection with the grid, they can encourage or discourage other firms from selling goods and services that may reduce household demand.”*¹²³

From the above, we get that the distributors are best placed to affect the situational factors that influence emissions from individuals with respect to electricity. Given the utilities distributors bear comparatively lower information costs, capital costs as well as costs of bringing about collective action, they seem to be the least cost avoiders for emissions from individuals for electricity consumption. Assuming that individuals and households are discrete direct sources for electricity-related emissions, it would still stand to reason to categorise utilities distributors as the end-users for the purpose of regulating such emissions.

Taking into account both accounts of inventorying emissions – the producer and consumer models – I would like to guardedly suggest that given the burdens that are reallocated, i.e. the costs of identifying, differentiating, MRV, there doesn’t appear to be a strong case for an efficiency rationale for reassignment of liability to individuals or households. Given these costs coupled with the costs of households participating in a trading mechanism, it

¹²² Ibid, p. 1533 -1535.

¹²³ Ibid, p. 1532.

seems more reasonable to characterise the climate end-user as a comparatively large installation.

IV. CONCLUSION

The PCT Report, the scholarly literature on PCT and ancillary literature looks at regulation in an either-or framework: regulation should happen either at the EU or Member State level. Initially, I thought along similar lines and felt the need to make an argument for extending the scope of an EET beyond the Member State. A preliminary glance at EU climate policy may also suggest that for sectors not covered under the EU ETS, Member States are completely autonomous in deciding on climate regulation. Familiarity with the EU regulatory architecture as well as scholarship on the multi-level regulation of climate risk made me realise that this dichotomy is untenable. In Chapter 5, I discussed how the EU assumes relevance with regard to the political economy of regulating individual climate action. In this chapter, I examined the law on climate federalism in the EU and the operation of the principle of subsidiarity. From this analysis, the intimate relationship of the EU and Member States in relation to *any* climate regulation became clear.

The conventionally held view is that the EU ETS pertains only to certain ‘sectors’ and the ESD applies to non-ETS sectors within which households can be potentially included. However, I argued that this is not the case. The EU ETS Directive pertains not only to existing climate action but also potential climate action, and additional action is shaped by association with the EU ETS. This is not only with respect to cost-effectiveness of other policies, but also the way climate responsibilities are distributed and burdens are allocated. The ‘administrative federalism’ of the EU considers costs such as Monitoring Reporting and Verification, endorses experimentation, and deals with the problem of leakage centred on a producer-based regulatory model. If that is the case, then where would we locate individuals and households within the regulatory architecture found in the European legal order? I suggest that problematising the category of a ‘sector’ reveals that current regulation deals with direct and indirect sources. Most of the literature on PCT and similar schemes that attributes emissions for the consumption of energy to individuals essentially make a normative judgement for considering the individual

or a household as a direct source. I show that distributive judgements in describing emissions from individuals and households are made with respect to calculating, modelling and inventorying direct as well as indirect emissions. Given the inevitable normative judgements in attributing responsibility to individuals and households for emissions, I draw on Calabresi, Caney and the situationist inclination of BLE to make the (somewhat heretical) argument that the end-user does not need to be an individual or a household; rather the end-user should be conceptualised as the least cost avoider and most advantaged agent in relation to climate regulation.



7

PROPORTIONALITY OF AN EET SCHEME*

7

Along with subsidiarity, proportionality is an explicit tool of decision-making by institutions in the European legal order. In addition, it is used as a pre-eminent interpretative device by the European Court of Human Rights. Thus Member States have to demonstrate the proportionality of their chosen policies when they seek to deviate from EU law, or when they appear to infringe individual rights. In addition, the reasoning toolbox offered by proportionality has had a horizontal effect in judicial reasoning in Member States.¹ It has come to be adopted as the chosen mechanism of conducting a

* Some of the ideas discussed in this chapter, primarily a 'precautionary approach to the proportionality principle' have been raised earlier in Suryapratim Roy and Edwin Woerdman, 'Situating *Urgenda versus the Netherlands* within Comparative Climate Change Litigation' (2016) 34 *Journal of Energy And Natural Resources Law* 165.

¹ The effect in replacing or reinforcing earlier standards of review have been different. In the UK, the 'reasonableness' standard seems to have been altered by allowing for more intensive review. Chris Hilson, 'The Europeanization of English Administrative Law: Judicial review and convergence' (2003) 9 *European Public Law* 125. It may be noted that the experience in jurisdictions such as Ireland shows that the unclear way in which proportionality is used with regard to review of administrative action could allow for proportionality to be read into the reasonableness standard. For a discussion, see Alan D. P. Brady, 'Proportionality, Deference and Fundamental Rights in Irish Administrative Law: The aftermath of *Meadows*' (2010) 32 *Dublin University Law Journal* 136.

means-end rationality review of any administrative mechanism.² Given the importance accorded to proportionality, any assessment of the ‘rationality-based-legality’ of any regulation would have to satisfy a proportionality test.

I seek to argue in this chapter that proportionality is a useful tool in thinking through the desirability of an EET. My argument consists of two parts. The first part seeks to show that though *there is an entitlement to be free of emissions, there is no entitlement to emit*; the exceptionalism of climate change assumes a presumption in favour of curbing emissions. This idea can be expressed in terms of a ‘precautionary moderation of the proportionality principle’, whereby the conventional balancing of individual loss and social gain assumes a special flavour with regulators assuming a positive obligation to ‘take care of citizens’. While it is only a national court; i.e. the Hague District Court in *Urgenda*; that has to date applied a precautionary moderation of the proportionality principle,³ I will argue that the ECHR confers a positive duty of care onto both Member States as well as the EU legal order due to the requirement of equivalent protection. Following this line of reasoning, it may be mandatory for *any party* to subscribe to climate regulation.

The above, however, does not answer whether it is suitable and necessary to involve households, and whether it is suitable and necessary to opt for an EET scheme. This brings me to the second part of my argument, where I will seek to show that though mandatory engagement with climate regulation could be considered legitimate, engaging individuals and households by way of an EET would not be suitable or necessary once an intensive ‘means’ test is undertaken. In this regard, a fundamental problem lies with the way individuals are understood in EU law. There is no critical mass on how the ‘cognitive load’ of individuals may be assessed in dealing with climate policy. Given the recent interest in EU regulation in relaxing the assumption of the rational consumer, I argue that it is about time regulators and judges rely on situationist inputs to assess the reality of individual behaviour. The first

² Paul Craig, ‘Proportionality, Rationality and Review’ (2010) *New Zealand Law Review* 265. Craig demonstrates that proportionality is a general ground of review even in non-rights cases, though the intensity of review might vary.

³ Roy and Woerdman, ‘Situating *Urgenda versus the Netherlands* within Comparative Climate Change Litigation’, *supra*, pp. 180 – 183.

step is of course the requirement for an intensive analysis by policymakers as well as an intensive review process by judicial bodies. Even if this were done, it is doubtful whether the proportionality principle can do the work that is required of it.

In brief, this chapter will suggest that individuals and households have no inalienable right to emit, but nor is there any justification for making them liable for emissions, or force them to bargain (should the element of mandatory engagement not be in issue, then the issue of intervention does not arise). To require an individual to participate in a cap-and trade scheme would be to require participation despite the costs of doing so. This chapter proceeds as follows. Section I provides an introduction to the proportionality principle in the European legal order and its relevance for climate law. Section II views an EET scheme through a proportionality lens, and Section III concludes.

7

I. CONCEPTUALISING PROPORTIONALITY IN RELATION TO EU CLIMATE REGULATION

A. Introducing Proportionality

As is well established⁴ and as Porat and Cohen-Eliya summarise, the proportionality test as applied in most jurisdictions broadly consists of three sub-tests: first, the purpose of an intervention or policy must be appropriate (legitimacy); second, the means adopted to further the governmental end must be *appropriate* for furthering that goal (suitability) and must be those that *least infringe* on the right of the individual (necessity); and third, the *loss to the individual* resulting from the infringement of the right must be proportional to the *governmental gain* in terms of furthering the governmental goal (proportionality in the strict sense, often characterised as balancing).⁵ The test adopted by EU courts includes these components, with the exception that a difference in intensity of review has been chalked out, with Member

⁴ Jan Jans et al, *Europeanisation of Public Law* (Europa Law Publishing, 2007) 148.

⁵ Iddo Porat and Moshe Cohen-Eliya, 'American Balancing and German Proportionality: The historical origins' (2010) 8 *International Journal of Constitutional Law* 263.

State laws subject to a higher intensity review, or proportionality in the strict sense.⁶ Further, a higher intensity review appears to be a way of acknowledging constitutional protections; what may be characterised as inalienable entitlements seem to be subject to a higher standard of review. It may seem odd that inalienable entitlements are subject to compromise, but the EU does not seem to make a strict distinction between alienability and inalienability, which has troubled deontologically minded scholars.⁷ We will return to this issue shortly. It may also seem odd that proportionality cuts across all fields of law irrespective of how they may be categorised. The omnipresence of proportionality has historical backing: Aristotle found proportionality to be a principle of ‘justice as proportion’, or one where a ‘rational principle’ determines the distribution of shares apportioned to individuals in society.⁸ The application of this abstract idea into concrete and diverse areas of law was articulated by Aquinas and Grotius; Aquinas developed the necessity and suitability components in the context of self-defense, and Grotius developed the idea of balancing conflicting interests in dispute resolution.⁹ The idea of appropriateness of means to ends – or the avoidance of ‘shooting sparrows with cannons’ – pervaded different legal systems, primarily with respect to the proportionality of actions taken by the police. There was a difference, however, in the areas of law that the proportionality principle was applied in different jurisdictions: in Germany, it was administrative law as the Supreme Administrative Court in Germany developed the principle,¹⁰ as against general courts in common law jurisdictions that considered variations of means-end reasoning. The initiative of the administrative judges to chart out their own path perhaps explains why Germany would have such a prominent

⁶ See for instance Wolf Sauter, ‘Proportionality in EU Law: A balancing act?’ *TILEC Discussion Paper DP 2013-003*.

⁷ Tsakyrakis, ‘Proportionality’, *supra*. The opposition in American law with regard to balancing is more intense.

⁸ Eric Engle, ‘The History of the General Principle of Proportionality: An overview’ (2002) 10 *The Dartmouth Law Journal* 1, pp. 3 – 4.

⁹ *Ibid*, p. 5.

¹⁰ Jud Mathews, ‘Proportionality Review in Administrative Law’, Available at: https://www.law.yale.edu/system/files/area/conference/compadmin/compadmin16_mathews_proportionality.pdf.

role in developing proportionality as a principle of administrative review. The origins and development of administrative review fused with constitutional review due to yet another institutional initiative when the newly formed German Constitutional Court in postwar Germany broke new ground by characterising proportionality as a constitutional principle.¹¹ This unique trajectory of an administrative principle that developed into a constitutional principle eventually heavily informed the substance of the proportionality principle as a general principle of review in the European legal order.

7

B. Proportionality as a Tool of Reasoning about EU Climate Regulation

Proportionality operates as a reasoning tool in legislative and executive action; irrespective of the institution that employs the principle, it serves as a heuristic device in balancing individual and social interests. Much like its operation in institutional reasoning, it may serve as a way to address the central concern of L&E – how to think about the relationship between individual entitlements and social outcomes. In this regard, it is perhaps important to clarify that proportionality serves to *facilitate or constrain* redistribution by a legislative or regulatory intervention. Given its relevance in examining regulatory intervention against existing individual entitlements, the principle derives legitimacy from justifying the validity of distribution. To clarify, guarding against the infringement of a pre-determined right or a freedom by regulation is essentially an injunction against redistribution, as the entitlements recognised in the *status quo* remains intact. However, proportionality also serves to reconstruct regulatory questions in terms of entitlements; stakeholders seeking to challenge regulatory interventions may frame such interventions in the language of rights and freedoms, thus reconstituting

¹¹ Cohen-Eliya and Porat, *supra*, pp. 284 – 285. Following Dieter Grimm, Cohen-Eliya and Porat suggest that the Court could not have predicted the importance of this move. However, drawing on the narrative presented by Cohen-Eliya and Porat, it may be suggested that the Court in postwar Germany was responding to a political situation similar to the final years of the eighteenth century, that of the move away from the government being the sole source of authority to that of a state ruled by law. Prussian law drafted in the twilight of the eighteenth century also incorporated a requirement that the police take ‘necessary measures’ in maintaining peace, thus incorporating a proportionality principle.

regulatory action as distributive choices. This does not mean, however, that such choices would necessarily pre-empt efficiency considerations. This would be the case if all rights and freedoms were characterised as inalienable entitlements. To the contrary, by subjecting rights and freedoms to balancing exercises, proportionality provides a mechanism for introducing efficiency analyses,¹² leading some scholars to brand proportionality as ‘assault[s] on human rights’ by reconstituting entitlements through mathematical exercises.¹³ Given this tension, though there could be an incentive by reviewing bodies to be innovative about balancing exercises, such exercises need to be conducted within the language of entitlements for the reviewing bodies to enjoy legitimacy. At the same time, if overturning through review provides a credible threat, then the regulators of the first instance would be incentivised to (i) provide reasons behind their decisions, and (ii) shape their reasoning in the language of entitlements. In the EU legal order, given that the power to interpret the contours of such entitlements are distributed in favour of rights and freedoms recognised under EU law, national regulators are ‘threatened’ to reason within such contours. These contours have more force with respect to private parties. As the *Arcelor* case discussed below demonstrates, entitlements such as the ‘freedom to trade’ and ‘the right against non-discrimination’ are not inalienable.

Accounts of the relationship between proportionality and climate change in case law and other institutional speech-acts in the EU have been unusually taciturn and narrow. This is despite the fact that both the CJEU and the Commission have repeatedly referred to proportionality in relation to climate change concerns, including a stated preference for relying on proportionality rather than subsidiarity in assessing EU legislative acts on climate change.¹⁴

¹² Aurlien Portuese, ‘Principle of Proportionality as Principle of Economic Efficiency’ (2013) 19 *European Law Journal* 612.

¹³ Tsakyrakis, ‘Proportionality’, *supra*.

¹⁴ Commission’s Proposal for a Directive of the European Parliament and of the Council amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and the introduction of a mechanism to monitor and reduce greenhouse gas emissions from the use of road transport fuels and amending Council Directive 1999/32/EC, as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC, COM(2007) 18 final, para 9; Commission’s Proposal for

Specifically, as Croquet observes,¹⁵ the suitability test has been curiously absent in any discussion on EU climate law. The closest the *CJEU* has come is its reasoning in the *Arcelor* cases regarding the legality of the EU ETS and whether it infringes on industries' freedom to trade, and amounts to discrimination among private parties by requiring some industries to participate while exempting others.

In *Arcelor SA*,¹⁶ the General Court explicitly mentioned that the EU ETS needs to satisfy the requirements of proportionality and equal treatment of private parties. Though *Arcelor* was not granted standing as a private party before the Court, determining such standing based on 'direct and individual concern' required an examination of whether infringements of the right to property and freedom to pursue an economic activity were proportional, and whether there was any specific discrimination of the claimant. *Arcelor* contested the inclusion of installations for the production of pig-iron and steel, and if such installations could not be excluded, then the procedure of including installations devised under the EU ETS Directive was faulty and hence the Directive itself should be annulled. *Arcelor* claimed that the Directive "infringed the applicant's right of property, its freedom of establishment and its freedom to pursue an economic activity as well as the principle of proportionality by failing to take account of the technical and economic impossibility for steel producers to reduce CO₂ emissions any further."¹⁷ Proportionality in general was found to have been satisfied as the Commission had 'broad discretion' and it was not established how the

a Directive of the European Parliament and of the Council on the geological storage of carbon dioxide and amending Council Directives 85/337/EEC, 96/61/EC, Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC and Regulation (EC) No 1013/2006, COM(2008) 18 final, paras 6-7; Commission's Proposal for a Directive of the European Parliament and of the Council on energy efficiency and repealing Directives 2004/8/EC and 2006/32/EC, COM(2011) 370 final, para 6; Commission's Proposal for a Directive of the European Parliament and of the Council on the promotion of the use of energy from renewable energy sources, COM(2008) 19 final, para 10. For a discussion, see Nicholas A.J. Croquet, *European Climate Change Law: EU Courts' difficult relation with proportionality*, University of Oxford EU Law Discussion Group, Oxford, 17 October 2012. Copy on file with the author.

¹⁵ Ibid.

¹⁶ Case T-16/04 *Arcelor v. European Parliament and Council of the European Union* [2010] ECR II-211.

¹⁷ Case T-16/04, para 175.

EU ETS was ‘manifestly inappropriate to achieve the goal of reducing CO₂ emissions.’ The General Court rejected Arcelor’s claims; with regard to right to property as well as the right to conduct economic activity, the Court found that the contested provisions do not result in ‘substantial negative economic consequences’¹⁸ or ‘unfavourable consequences’ as the applicant ‘failed to produce precise figures in relation to the profitability of those installations.’ Importantly, proportionality was used to understand the relationship between the specific concerns of a private party and the generality of the EU ETS as a preferred regulatory mechanism, as is clearly brought out in its discussion of equal treatment. In this regard, the General Court deferred to the reasoning by the CJEU in *Arcelor Atlantique* regarding whether there was a ‘sufficiently serious breach of equal treatment’ when pig iron was a sector covered under the EU ETS, while chemical was not. It classified its understanding of equal treatment into ‘unequal treatment of comparable situations’ and ‘equal treatment of dissimilar situations.’¹⁹

While finding that there is a *different* treatment accorded to the chemical and steel sectors, such treatment will not be considered to be *unequal* if justified. Different treatment, in turn, may be justified if it ‘is based on an objective and reasonable criterion, that is, if the difference relates to a legally permitted aim pursued by the legislation in question, and it is proportionate to the aim pursued by the treatment.’²⁰ The ‘objective and reasonable criterion’ to gauge the ‘appropriateness of Community legislative action’ in this case was ‘administrative feasibility’ and ‘administrative complexity’ of the EU ETS that is ‘novel and complex’: the Court felt that based on administrative concerns, for the purpose of the implementation of the EU ETS, it is necessary to ‘attain the critical mass of participants necessary for the scheme to be set up’²¹ in a step-by-step manner. Thus, there was no unequal treatment as the difference in treatment was justified owing to the administrative necessity of a nascent scheme. In both the *Arcelor* judgements, the Courts defer to the ‘objective and reasonable’ assessments of the Community institutions regarding the

¹⁸ Case T-16/04, para 168.

¹⁹ Case T-16/04, para 167.

²⁰ Case C-127/07, para 47.

²¹ Case C-127/07, para 60.

administrative complexity of a chosen climate instrument, and constitutional principles such as equal treatment were brought in line via proportionality to enable administrative feasibility. If the Courts looked for a ‘least cost alternative’ then perhaps the assessment of proportionality may have included a deeper analysis of suitability and necessity.

It is important to note that despite being a private undertaking, Arcelor does not claim entitlements that may be equated to individuals; rather, what is at stake is economic freedom. Economic freedom is at the heart of the European legal order, not only because the free movement of goods and services is considered a value in itself, but also because economic freedom underpins the possibility of ‘undistorted competition’, which at the very least is an intermediary objective of EU climate regulation.²² The assessment of costs is intimately connected to the moderators of the European legal order, namely vulnerability to competition distortions and functioning in the common market. This logic, therefore, is primarily applicable to firms. From *Arcelor* it is clear that the pursuit of competition does not entail unfettered economic freedoms.

Thus, the proportionality of climate regulation in the EU has been articulated with respect to firms. Having said that, the observation that the proportionality of climate policy requires the assessment of compliance costs incurred by private parties is instructive for individuals as well. The Court’s reasoning that the EU ETS should not result in ‘substantial negative economic consequences’ allows the Court to conclude that it does not disproportionately affect the freedom of private undertakings to engage in economic activities. The use of the term ‘substantial’ suggests that some consequences are legitimate.²³ Should the applicant have been an individual, then the way freedom and equality have been reasoned may have been

²² For a review, see Vedder, ‘The Formalities and Substance of EU External Environmental Competence’, *supra*.

²³ Some commentators have critiqued the proportionality principle on this ground, arguing that some rights are absolute and should not be subject to any qualification. See for instance Stavros Tsakyrakis, ‘Proportionality – An assault on human rights?’ (2009) *International Journal of Constitutional Law* 1.

different as the entitlement would not be restricted to the performance and engagement with economic activities.

II. PROPORTIONALITY AND EET

A. Legitimacy of Climate Regulation

It was suggested above that perhaps climate change cases such as *Arcelor* are not valid precedents for assessing the proportionality of a climate change measure with respect to individuals and households. In this section, I seek to argue that individuals have no inalienable entitlement to emit; rather, individuals could be said to possess an inalienable entitlement to be free of emissions.

The argument that a citizen of a Member State has a right, or an entitlement to be free of emissions was suggested, though not endorsed, in *Urgenda*. The primary argument the Court relied on to chalk out an obligation of the State to take higher climate measures was that it owed a ‘duty of care’ to its citizens. This duty of care was found in Dutch civil law rather than in human rights law, or with regard to fundamental rights of citizens found in EU law. Having said that, the Court referred to the persuasive value of the European Convention of Human Rights, primarily Articles 2 and 8: “Although *Urgenda* cannot directly derive rights from Articles 2 and 8 ECHR, these regulations still hold meaning, namely in the question discussed below whether the State has failed to meet its duty of care towards *Urgenda*.”²⁴ To clarify, when the Court refers to ‘*Urgenda*’, it refers to the *Urgenda* Foundation that filed a public interest lawsuit in the Hague District Court. The Court observed that the *Urgenda* Foundation itself is not a ‘victim’ within the meaning of Article 34 of ECHR²⁵ and therefore could not directly rely on the provisions of the ECHR. This could explain the reasoning as to why the Court thinks that Articles 2 and 8 are not directly applicable. Strangely, the Court was silent as to whether individuals could derive their rights from the ECHR; this is a question that is

²⁴ *Urgenda*, para 4.52

²⁵ Article 34 allows victims of the breach of the Convention to directly file claims before the ECtHR provided she is affected by an action or omission of a contracting party to the Convention and has not gained sufficient redress yet.

still unresolved. In any event, it may be useful to understand how Articles 2 and 8 may ‘hold meaning’ with respect to climate change.

Article 2 of the ECHR provides a ‘Right to Life’ entitlement and Article 8 of the ECHR provides a ‘Right to Respect for Private and Family Life’. Article 8(2) clarifies that “There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic wellbeing of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.” The extent of interference is in essence a question of proportionality,²⁶ and that too involves intensive review. In the context of climate change, it may flow from this provision that proportionality would allow the State to interfere with one’s privacy for environmental considerations, but it would need to justify this interference. Further – and this is where the petitioners in *Urgenda* make an innovative argument²⁷ – the fundamental right to a private and family life confers a positive obligation on the State to take reasonable and appropriate measures to protect such a right.²⁸ Given the hazards posed by climate change, the State needs to demonstrate that its limited action on climate change is justified given its positive obligation to secure the substantive right to a private life. The tables are turned, as it were, with the State being required to demonstrate why it is not doing more, rather than keeping from unduly

²⁶ See Daniel Thym, ‘Respect for Private and Family Life under Article 8 ECHR in Immigration Cases: A human right to regularize illegal stay?’ (2008) 57 *International and Comparative Law Quarterly* 87, pp. 91 – 93.

²⁷ Summons, paras 243–257. A translation of the Summons is available at: <http://www.urgenda.nl/documents/FINAL-DRAFT-Translation-Summons-in-case-Urgenda-v-Dutch-State-v.25.06.10.pdf>.

²⁸ A similar argument has been made in the context of Italian constitutional law, where a positive right to be free of environmental harm has been read into Article 2 of the Italian Constitution that ‘recognises and guarantees the inviolable rights of the person, both as an individual and in the social groups where human personality is expressed.’ (The English translation of the Italian constitution is available at: https://www.senato.it/documenti/repository/istituzione/costituzione_inglese.pdf). Salvatore Patti, *La Tutela Civile dell’ambiente*, (Padova: CEDAM, 1979). Whether this argument may be applicable to climate change in Italy needs further investigation.

interfering with the right of individuals to pursue their lives. Thus, the use of human rights to prompt regulatory action on climate change, found to be an ‘elusive remedy’²⁹ in other jurisdictions and legal systems, appears to shape state liability on climate change in the European legal order by virtue of the ‘a precautionary moderation of the proportionality principle’³⁰ applied to Article 8 of the ECHR.

The implications of the above line of reasoning would be profound for the various legal concerns that animate EU and national climate regulation. In effect, there is a reversal of the burden of proving comparatively lesser action on climate change. Further, the State is liable for bearing the costs of protecting individuals and families from climate risk by virtue of this positive obligation. For instance, arguments regarding interference with economic freedom would be reframed as interference with private and family life. Should the above interpretation be accepted, there is *an entitlement to be free of hazardous climate change rather than an entitlement to be free of climate regulation*. Accordingly, the proportionality test would be reversed: there would no longer be a presumption of freedom from climate regulation unless proved otherwise. Recall *Arcelor’s* argument discussed above that the EU ETS Directive ‘infringed the applicant’s right of property, its freedom of establishment and its freedom to pursue an economic activity as well as the principle of proportionality’. The Court did not feel the Directive amounted to such infringement. Drawing on the above, I would like to suggest that if a regulation (or the absence of one, or unsuitability) allegedly interferes with a right to life or the right to respect for a private and family life, then that would prompt a more intensive review. Per this account, there appears to be a relative weighting of entitlements with ‘right to property’ and the ‘freedom to pursue an economic activity’ on one hand, and ‘right to life’ and ‘respect for private and family life’ on the other. The way this can be justified is by taking a leaf out of *Arcelor*: the infringement of property and pursuit of economic activities can be made commensurable across different actors by examining the costs of engaging with the EU ETS, and finding them to be not punishing. The costs

²⁹ Pamela Stephens, ‘Applying Human Rights Norms to Climate Change: The Elusive Remedy’ (2010) 21 *Colorado Journal of International Environmental Law and Policy* 49.

³⁰ Roy and Woerdman, *supra*, pp. 181 – 183.

of finding a yardstick of commensurability for ‘life’ and ‘private and family life’ seem infinite. Given the interest in reducing the risk from climate harm, the necessity and suitability of measures would need to be examined to assess whether the State is appropriately pursuing its obligation to keep individuals and households free of climate risk.

B. Necessity and Suitability of EET

It was suggested above that a climate policy on mandatory engagement of individuals may be considered legitimate if such a measure can be presumed to protect individuals from climate risk. The mandatory engagement of individuals can take different forms: an individual can bear the burdens of climate action without liability (such as additional costs passed through down the carbon chain) or may be required to be liable (such as carbon tax, or an EET with a liability mechanism such as a penalty). The nature of mandatory engagement would have to be justified once we probe deeper into the necessity and suitability of an EET as the appropriate regulatory framework for engagement. In Chapter 6, it was shown that a distinction could be maintained between direct and indirect emissions from individuals. It was also argued that given the complexity of causal responsibility, as well as the possibility of identifying the end-user as the unit that can reduce emissions at the lowest cost and the most advantaged, an individual does not necessarily need to be categorised as an end-user. In this section, I will argue that the proportionality test would provide a mechanism in identifying a comparative assessment of the ‘advantage’ enjoyed by an individual. Following this, I will argue that the individual or the household should not be characterised as the end-user for the purpose of assignment of liability. Having said that, I will (guardedly) suggest that a pass-through of costs may be warranted to meet the primary objective of emissions reduction, even if such practice may be comparatively inferior in meeting the secondary objectives of energy efficiency and reducing competitive disadvantage.

i. Costs of Individual Engagement

It was suggested above that the ‘costs and benefits’ for an individual is different from the costs and benefits of a private undertaking. While all of a firm’s freedoms can be encapsulated in its liberty to carry out economic

activities (and the instrumental connection with EU protection against competitive vulnerability), the same cannot be said for an individual.³¹ For firms, there is an assumption of rational behaviour, manifested in economic activity. However, for individuals, acting rationally despite one's cognitive load is a transaction cost. This cost is borne by individuals engaging with a complex policy mechanism. How to assess the cognitive load is a complex issue as discussed in Chapter 4, and would involve a host of methodologies to identify a situated individual participating in collective action, of which laboratory experiments constitute only one component. In the event such transaction costs taking into account one's cognitive load and the capability to be 'climate rational' are higher for an EET than other mechanisms to engage the individual, then it cannot be deemed to be the 'least-cost alternative' or the 'least infringing' policy mechanism. In such case, other forms of indirect or direct mechanisms may be adopted.

In Chapter 2, I limited my understanding of costs to administrative costs. Much like other L&E scholars, I viewed climate regulation in Stiglerian terms; i.e. once transactions costs are removed, then the market will work things out. To begin with, conflating administrative costs and transaction costs is incorrect; administrative costs constitute only one component. There are more fundamental costs that are papered over in a rhetorical use of the phrase 'transaction cost'. If one reads the literature on engaging individuals in climate regulation,³² more foundational issues become clear: no answer is given as to whether penalties should be imposed on individuals, no answer is given about whether children should be allocated allowances, no answer is given as to how double counting can be avoided. My response would be that no answer is given because much like the normative issues that make it difficult to quantify a social cost of carbon³³ these questions elude quantification or

³¹ The distinction between the rationality of organisations and the rationality of individuals was clearly made by Simon to argue that if organisations pursue a satisficing rather than maximizing rate of profit, then individuals would be able to approximate this reality. Reva Brown, 'Consideration of the Origin of Herbert Simon's Theory of Satisficing' (2004) 42 *Management Decision* 1240, p. 1245.

³² See the discussion in Chapter 2 on PCT, TEQ and other analogous regulatory proposals.

³³ Per Masur & Posner, computing the social costs of carbon entails political questions that 'cost-benefit analysis cannot answer'. Masur and Posner, 'Climate Regulation and the Limits

even a common language of analysis;³⁴ but concentrating on administrative costs without sorting these issues out amounts to making a distributive choice regarding unquantified costs. From the discussions in this book, the primary costs can be grouped as follows:

Abridgement of Entitlements and Costs of Equivalence: In Section IIA, it was suggested that there is no entitlement to emit; rather, following Article 8 of the ECHR there seems to be an entitlement to be free from emissions, and a corresponding duty on Member States to protect citizens from climate risk. This does not, however, address the issue of how much other entitlements may be compromised without being ‘assaulted’. In the reasoning on *Arcelor*, the costs of the EU ETS on a cement company’s freedom to trade and restrictions on property may be computed, and the costs on all installations may be made commensurable through quantification of expenditure, or ‘negative economic consequences’ that affect profitability.³⁵ The same cannot be said for privacy of a home, or the costs of engaging with the technologies of an EET by ‘a mother with failing eyesight’.³⁶ Myriad facets of an individual or a household cannot be commensurably categorised; a firm can: the primary *raison d’être* of a firm is maximising profits on behalf of its shareholders. Commensuration is particularly problematic if such facets lend themselves to the language of entitlements, as is evident from the successful right to privacy challenge to the proposed mandatory installation of smart meters in Dutch households in 2009.³⁷ The example may not be completely analogous to an EET, as a primary

of Cost-Benefit Analysis’, *supra*, p. 1597.

³⁴ Refer to the discussion on the incompatibility of sociological and psychological studies on the individual and climate change in Chapter III; see also the seemingly insurmountable difficulties in reconciling efficiency and justice discussed in Chapter V.

³⁵ Case T-16/04, para 168. Though the CJEU in *Arcelor* – or in any climate change case for that matter – did not detail what expenditure that might affect profitability entails, the proportionality of expenditure could be said to entail the monetisation of costs of purchasing allowances (in case of auctioning), Monitoring Reporting and Verification costs, costs of participating in primary and secondary markets after subtracting the costs passed through as well as derivative financial gains from various markets. These costs would then be weighed against the annual revenues generated by the installation.

³⁶ Response 6 to Pilot Survey discussed in Chapter V.

³⁷ Influential in this regard is the Tilburg report commissioned by the Dutch Consumers Association that played a significant role in the 2009 decision against compulsory smart-

concern was with regard to data privacy in releasing household consumption data to suppliers and third parties, for which a revised requirement for obtaining explicit consent has been made. Having said that, one of the other concerns mooted was the inviolability of the privacy of the family, and in an interesting twist, the primary provision relied on was Article 8 of the ECHR. So we have a situation whereby the same provision may be used to support a requirement for individuals and households to bear burdens to be free of risk, as well as support the freedom of individuals and households to be free of interference from risk regulation. How could we deal with this issue? One way out is to create a priority or a hierarchy of concerns. It could be argued that ‘Climate Armageddon’ assumes priority, and much like an emergency situation requires the relaxation of other rights.³⁸ This is a problematic way to assess the situation, as there is no reliable way to answer how much and what infringement is enough. Much like the discussion in Chapter 5 on conflicting ideas of justice, there appears to be a stalemate that cannot be resolved. We may refer to this problem as *the incommensurability of entitlements*. Indeed, resolving this problem is not simple, but if I may request the reader to find her way back to Chapter 3, and eventually all the way back to Chapter 1, BLE could provide a hint at making entitlements compatible.

I suggested in Chapter 3 that a ‘right’ could be seen as a mediator, or a legal device that reconciles means and ends, and that could be moderated. Indeed, if a right is seen as an inviolable category, then there is no scope for such reasoning. Going back to Chapter 1, it was shown that the primary thrust of BLE is that much like any other preference, a legal category is situated rather than assumed. It was suggested that the reliance on fossil-fuels that appears to be the *tabula rasa* situation in which households make ‘private’ choices is very much situated; it owes as much to the interaction of multiple agents that created the dependence on fossil fuels as well as the

meters in Dutch homes. See Colette Cuijpers and Bert-Jaap Koops, ‘The ‘Smart Meters’ Bill: A privacy test based on Article 8 of the ECHR’. Available at: https://pure.uvt.nl/ws/files/1477311/CPDP_final_Cuijper_Koops_springer_1_.pdf.

³⁸ For an argument along such lines, see Han Somsen, ‘When Regulators Mean Business: Regulation in the shadow of environmental armageddon’ (2011) 4 *Rechtsfilosofie & Rechtstheorie* 47.

operation of the endowment effect where individuals are hesitant to let go of what they've become accustomed to. Thus, the entitlement to make private decisions regarding energy use is effectively *a normalisation of distributed situational factors* that is subsequently recognised, rather than a natural right. The categorisation of a bundle of situated energy habits that may be found inside the walls of a household as an inviolable entitlement is amenable to re-categorisation. Analogously, Holmes and Sunstein categorise *any* right as interests that may be instrumentally achieved through the State, and which necessarily entails budgetary costs.³⁹ In this way, negative rights (or those rights that entail freedom from interference, conventionally categorised as civil & political rights) and positive rights (or those rights that entail an obligation on the State, conventionally categorised as social & economic rights) are made equivalent by re-categorising rights as interests. This equivalence appears to be assumed by the ECtHR in *Hatton v. UK*,⁴⁰ where the Grand Chamber felt that it is not required to decide 'whether the present case falls into one category or the other'⁴¹ given that 'in both contexts fair balance has to be struck between the competing interests of the individual and of the community as a whole'.⁴² Thus, following all three categorisations of rights: recognition of distributed situational factors, interests that entail budgetary costs and interests that need to be balanced, the right to privacy (among others) can be brought into equivalence with the right to be free of emissions. It could be argued that a claim to a life free from climate risk and the accompanying inability to assess one's fallibility in discounting provides a justification for abridging privacy, thereby bringing about compatibility without engaging in commensurability.

Having said the above, the proportionality principle does not accommodate a presumption of abridging entitlements, and therefore the process of achieving equivalence of interests is costly. There could be a presumption in favour of regulation to protect people from climate risk. However, there is no

³⁹ Stephen Holmes and Cass Sunstein, *The Cost of Rights: Why Liberty Depends on Taxes* (New York: W.W. Norton, 1999), p. 16.

⁴⁰ ECtHR, *Hatton and others v United Kingdom (Grand Chamber) (2003)* ECLI:CE:ECHR:2003:0708JUD003602297.

⁴¹ *Ibid*, para 119.

⁴² *Ibid*, para 98.

presumption regarding the necessity and suitability of a regulation that abridges rights.⁴³ As discussed above, the proportionality test applies to situations where there is an abridgement of rights, and it applies in non-rights cases as well. Given the presumption in favour of rights, in the event there is an alternative to abridging rights to secure the same ends, then such a measure will be preferred.⁴⁴ Briefly put, though any complaint regarding infringement of energy and emissions related rights could be categorised as an interest that needs to be weighed and balanced against the aim of reducing emissions, in the absence of commensurability of costs that may be achieved with respect to firms in the EU ETS but not so with respect to individuals and households, the costs of arriving at – and predicting judgements on – equivalence are high. This could be explained in terms of BLE as well. Conventional microeconomic theory gets over the problem of interpersonal comparisons of utility and equivalence by positing that individual preferences may be made commensurable through their utility functions.; consumers seek to obtain the highest mathematical score on a single utility function.⁴⁵ A social planner would seek to identify a set of util numbers for possible objects of choice, and make regulatory choices ‘as if’ people maximise the mathematical total of utils. The set of assumptions behind this constitute the rational actor axiom; sophisticated methods are in service of this axiom. Properties of the rational actor axiom include continuity of preferences, including predictable discount rates. The primary thrust of

⁴³ In the *Hatton* case that involved a conflict between the rights of citizens living near Heathrow airport to be free of noise by night flights and the freedom of airlines to earn revenue, the first Chamber of the ECtHR ruled that Article 8 imposes a duty on the State to ‘find alternative solutions’ (to the preferred adoption of ‘noise quotas’) and by ‘seeking to achieve their aims in the least onerous way’. ECtHR, *Hatton and others v United Kingdom* (2001) ECLI:CE:ECHR:2001:1002JUD003602297, para 106. The Grand Chamber subsequently overturned the judgement but on the grounds of the margin of appreciation of the State to decide on the issue, and no ‘special status’ in this regard may be accorded to ‘environmental human rights’. ECtHR, *Hatton and others v United Kingdom (Grand Chamber)* (2003) ECLI:CE:ECHR:2003:0708JUD003602297, para. 122. It may be noted that the Grand Chamber delivered its majority judgement by 12 votes to 5 with a strongly worded dissent, thus revealing the uncertainty of arriving at an equivalence of different rights.

⁴⁴ In this regard, the reasoning of the first Chamber in *Hatton* was not reversed by the Grand Chamber that the ‘least onerous’ means has to be identified.

⁴⁵ See Andreu Mas-Colell, Michael D. Whinston and Jerry R. Green, *Microeconomic Theory* (Oxford: OUP, 1995), pp. 46 – 47.

behavioural economics is to demonstrate how individuals depart from their expected utility behaviour: this is the axiological concentration of behavioural economics. As discussed in Chapters 1, 3 and 4, behavioural economics does not go the next step of making people rational; i.e. behaving in accordance with modelled utils. Thus, the thrust of BLE is that since people are not rational, there is a need for some form of paternalism, or alternative arrangements for looking after individual interests. This line of reasoning is compatible with the discussion above that climate and energy choices and habits are situated within institutional and social arrangements. The same could be said for – drawing on the introduction to ‘situated motivation’ in Chapter 1 and the discussion on social norms in Chapter 4⁷ – the difficulties in assuming that individuals can change their behaviour by responding to incentives the way rational agents are expected to do.⁴⁶ Thus, though there is no inalienable entitlement to pollute, there is no low-cost way of making equivalent individual choices that may affect climate change.

Enforcement Costs: What is remarkable about the EU ETS (as compared to other environmental regulations within the EU) is the high level of compliance.⁴⁷ It is difficult to differentiate between the reasons as to why compliance is high. But four reasons may be forwarded: (a) the robust market for allowances allows participants to bargain, (b) the threat of a carbon tax (the ‘opportunity benefit’ issue discussed in Chapter 5) is high, (c) the large penalty (as discussed earlier, the assessment costs in deciding on a penalty are very low) is too forbidding, (d) regular checks through comprehensive MRV mechanisms.⁴⁸ None of these components would feasibly characterise

⁴⁶ See the discussion on ‘as-if’ behavioural economics and ‘as-if’ BLE in Chapter 1 Section II.

⁴⁷ Floor Fleurke and Jonathan Verschuuren, ‘Enforcing the European Emissions Trading System within the EU Member States: a Procrustean bed?’, p. 19 [forthcoming chapter; pre-print available at: http://entracte-project.eu/fileadmin/entracte/downloads/Floor_Fleurke_Jonathan_Verschuuren.pdf]. Fleurke and Verschuuren qualify their observation by pointing out that there are some lapses of enforcement within Member States for non-complying operators.

⁴⁸ As Weishaar notes, compliance with the EU ETS ‘necessitates a system that may perhaps be even more stringent than in the case under comparable command and control instruments’. Stefan Weishaar, *Emissions Trading Design: A Critical Overview* (Cheltenham: Edward Elgar, 2014), p. 150.

an EET where the individual or the household is the end-user. It may be suggested that there is no real need for an EET to mimic the enforcement mechanisms of the EU ETS; in fact, one of the attractions of a system that facilitates individual engagement with climate change is the possibility of a different paradigm, or one where incentives and a top-down system would not be necessary. In the event all individuals and households were motivated to participate, then enforcement costs would be low. This would require a very high level of public responsiveness. However, we have found no argument in this book to that effect. To begin with, there is no closure on how such responsiveness may be garnered through association with an incentive. Even if the experiment conducted in Chapter 4 yielded more conclusive results, it would be a very small piece of the regulatory costs incurred in understanding how the biases of individuals such as loss aversion could be harnessed practically through designing appropriate incentives. These regulatory costs, in turn, would be a small part of the larger picture of what motivates desirable behaviour, or the ‘dimensionality’ problem discussed earlier.⁴⁹ Given the high level of compliance in the EU ETS and the difficulties of understanding and influencing individual motivation that leads to effective climate action, it would be wise to account for emissions from individuals and households indirectly following a similar system through a reconceptualised end-user,⁵⁰ one which would be equivalent with the EU ETS.⁵¹

Bargaining Costs: Some leading commentators on climate policy – including Robert Stavins – are of the opinion that Coase suggests that a misallocation of climate responsibility would be irrelevant. Any misallocation would be corrected by the market; this is the ‘independence property.’⁵² I would strongly submit that this is a fundamental misreading of Coase, as the independence property would hold only when transaction costs are zero.⁵³

⁴⁹ See Chapter 4, Part III.

⁵⁰ See Chapter 6, Part III B.

⁵¹ See Chapter 6, Part III A.

⁵² Robert W. Hahn and Robert N. Stavins, ‘The Effect of Allowance Allocations on Cap-and-Trade System Performance’, *Resources for the Future* Discussion Paper, March 24, 2010.

⁵³ As Daniel Cole explains, “*Markets often do manage to reallocate entitlements to more highly valued uses. But – and this cannot be over-stressed – that has nothing to do with the ‘Coase*

Taking into account both the existence of transaction costs and the strength of the market, Calabresi argued that in the event it is difficult to identify the least cost avoider and thereby misallocate, the market will be best utilised by ‘the best briber’, and therefore allocation of costs should be made to such a party.⁵⁴ As to how the ‘best briber’ may be identified, Calabresi suggests that it is the party who has a higher awareness of risks and ease of conducting transactions (including identifying who to transact with and bribe). Thus, allocation of costs and responsibility should be done to those who are more rational in terms of having internalised a discounting rate in keeping with legal obligations, and those who can strategise better in the act of bargaining. As I argued in Chapter 4, experimental work on biases does not illuminate how individuals or households can behave like firms. It stands to reason that the bargaining costs of individuals and households in any market mechanism will be higher. This is more so because the absence of restrictions on the transferability of allowances brings in the prospect of financialisation. Though there is a dearth of studies on the distribution of financial literacy across Member States in the EU, financial literacy itself is a problem, as was brought to light after the recent recession.⁵⁵ This has resulted in several regulations that shift the onus of liability from the consumer to providers of financial goods and services. To reiterate a point made in Chapter 4, behavioural economics and behavioural finance point to flaws in the rational actor model, and using these disciplines within regulatory frameworks is to introduce top-down assistance to shape desirable behaviour. They do not, however, lend themselves to making people more rational market players. Regulatory interventions

Theorem. ‘As Coase himself has noted time and time again, the assumptions behind that theorem, including most importantly the assumption of zero transaction costs, never hold in the real world. When market reallocations improve efficiency, it is not because of the ‘independence property’ of the ‘Coase Theorem’; it is in spite of the existence of positive transaction costs and other impediments to transacting. Always.’ Available at: <http://cyclingprof.blogspot.nl/2010/03/hahn-and-stavins-are-pushing-my-buttons.html>. Cole does not have a more formal critique of Stavins, but for a similar argument, see Daniel A. Farber, ‘Parody Lost/Pragmatism Regained: The ironic history of the Coase theorem’ (1997) 83 *Virginia Law Review* 397.

⁵⁴ Calabresi. *The Costs of Accidents*, supra, pp. 150 – 152.

⁵⁵ See for instance, Jana Valent, ‘Improving the Financial Literacy of European Consumers’, European Parliament Briefing, May 2015. Available at: [http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/557020/EPRS_BRI\(2015\)557020_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/557020/EPRS_BRI(2015)557020_EN.pdf).

relying on behavioural economics do not have the power to create ‘procedural rationality’ to use Herbert Simon’s memorable phrase.⁵⁶ However, should the mechanics of the market be viewed as the sole incentive, then we must assume strategic procedural rationality (as economics conventionally does). Given BLE problematises but does not provide a practical replacement for rational self-regulation or provide guidance on how to instil procedural rationality, it is difficult to accept the independence property of an EET.

ii. Benefits of Individual Engagement

Three primary benefits of an EET scheme were listed in Chapter 2: Regulating Sustainable Engagement, Capping Uncapped Sectors and achieving Energy Efficiency through the backdoor. There is another one that may be added to this list from Chapter 6: Reducing Production and Investment Leakage. To begin with, other than ‘Capping Uncapped Sectors’, all of these benefits can be said to be ‘secondary objectives’. I will first address the issue of uncapped sectors and then proceed to the other benefits.

Capping Uncapped Sectors: It seemed intuitively reasonable in Chapter 2 to suggest that much like the EU ETS, an EET would provide a mechanism to limit the quantity of emissions in other sectors. Following the discussions in Chapters 5 and 6 this intuition has been problematised. To begin with, the category of a ‘sector’ has been sought to be explained. What was assumed to be a sector in Chapter 2 such as the household sector was shown to be a collection of activities with direct and indirect sources (see Figure 5). Accordingly, the activities in the household sector can be inventoried into direct and indirect sources. Indirect sources either already fall within the activities covered under the EU ETS (such as electricity), or measures that are currently underway or proposed. With respect to emissions, private transport can be categorised as the manufacture and sale of automobiles. It can also be categorised as the emissions from fuel

⁵⁶ Per Simon, an account of rationality must not only include ‘substantive rationality’ or ‘the extent to which appropriate courses of action are chosen’ but also ‘procedural rationality’ or ‘the effectiveness, in the light of human cognitive powers and limitations, of the procedures used to choose actions’. Herbert A. Simon, ‘Rationality as Process and a Product of Thought’ in David E. Bell, Howard Raiffa and Amos Tversky (eds.) *Decision Making: Descriptive, Normative, and Prescriptive Interactions* (Cambridge: CUP, 1988), pp. 66 – 69.

used in automobiles. On a more practical note, accounting for emissions from an indirect source raises a double counting problem. The double counting problem is not a mere administrative issue, as there is a potential to overestimate mitigation of emissions, and this would frustrate the whole idea of a cap. Further, the category of a 'source' was also subject to evaluation from a L&E perspective. The identification of a 'direct' source attributed to the consumer requires a redistributive reallocation through a different carbon accounting principle. As discussed, this is not a technical issue. Even if such identification were possible, there would need to be institutional backing for enforcing a cap, and implementing it through a cap-and-trade mechanism. This issue cannot be resolved without addressing all the costs discussed in the earlier section. It would be difficult to find an equivalent for the elegant Calabresian set-up of the EU ETS, where liability is imposed on installations and the price of allowances discovered through a market of firms. Thus, 'capping an uncapped sector' is not really a feasible benefit that an EET can offer, unless of course the end-user is conceptualised in a manner that does not necessarily mean individual or consumer or household.

Energy Efficiency: Now onto the secondary objectives. As discussed earlier, attaining energy security is a political objective that influences energy efficiency regulation, and this objective is not necessarily directed at reducing emissions.⁵⁷ Further, the choice of energy efficiency policies (such as Demand-side Management) can have negative emissions externalities.⁵⁸ Having said that, as the EU ETS Directive shows, it is likely that a mitigation policy would have a positive effect on energy efficiency. The focus on an EET is demand-side energy efficiency and the focus of the EU ETS is supply-side energy efficiency. The question for both is whether the schemes provide an adequate incentive for energy efficiency in order to save the maximum amount of energy at the lowest cost. For the EU ETS, the potential for energy efficiency lies primarily in the investment by installations in low-carbon technologies to bring down the amount of emissions in the production process. If producers are able

⁵⁷ See the arguments made by Anatole Boute, Chapter 5, Part IV.

⁵⁸ See the arguments made by Michael Vandenberg and Jim Rossi, Chapter 6, Part V.

to substantially pass-through electricity and fuel costs, then there might be an incentive for different consumers down the carbon chain to reduce their demand or switch to renewable sources of energy. Whether consumers would prefer to switch to other sources or reduce their consumption depends on other incentives such as subsidies, and is a question that demands situational investigation; or one that needs inputs from various social sciences to answer. To recall Vandenberg & Rossi's analysis, if the intention is to achieve energy efficiency in the electricity supply chain, the inclination of households is heavily mediated by the inclination of distributors; and categorising distributors as end-users for the purpose of mitigation regulation may be more suitable than categorising households as the end-user.⁵⁹ There is yet another factor that must be noted: Article 10(3) of the EU ETS Directive provides that at least 50% of the revenue from auctioning of allowances would need to be utilised for energy efficiency measures. Thus, if an EET has a substitutive effect on the EU ETS, then that would affect energy efficiency as well. Concomitantly, if the revenues generated from the EU ETS are effective in contributing to energy efficiency, then it would make sense to extend the EU ETS even to sectors proposed to be covered by an EET.⁶⁰ In any event, there seems to be no compelling argument for achieving energy efficiency through a cap-and-trade system for individuals.

Regulating Sustainable Engagement: In the literature on PCT and TEQ, one of the primary benefits often highlighted is that such an instrument will make individual emissions more visible,⁶¹ and this would lead to more awareness. Some reports mention the benefit of raising 'carbon consciousness.'⁶² DEFRA, in fact, observes that this may lead to a 'stop and think' system.⁶³ In Chapter 2, drawing on Mr. Beavan's potentially ineffective or even ill-advised actions to reduce household emissions, I took this a step further and suggested that

⁵⁹ Vandenberg and Jim Rossi, 'Good For You, Bad For US', *supra*. See discussion in Chapter 6, Section III.B.

⁶⁰ See discussion in Chapter 5 on how an EET could substitute potential measures.

⁶¹ Yael Parag and Deborah Strickland, 'Personal Carbon Budgeting', Oxford Environment Change Institute Working Paper UKERC/WP/DR/2009/014, June 2009, p. 5.

⁶² Starkey, 'Personal Carbon Trading', *supra*, p. 24.

⁶³ DEFRA, 'Synthesis Report', *supra*, pp. 8 – 9.

perhaps an EET would rationalise sustainable engagement. I had made one qualification and one argument in this regard: I had pointed out that ‘conscious cognition’ may not be brought about by information alone, but I had referred to the Carbon Rationing Action Groups to show that there seems to be a learning curve among voluntary groups that organise themselves in dealing with transaction costs such as accounting. The two intuitions - (i) awareness is always helpful, and (ii) consciousness would lead to behavioural change – are not supported by BLE. In relation to the first, the way information is framed,⁶⁴ the ‘contextual acceptability’,⁶⁵ the reference group that appreciates the information moderate the perception of an information mediator. In relation to the second, there is an inference that consciousness will lead to desirable behaviour. Unfortunately, as with the relationship between an incentive and behaviour, this inference cannot be drawn.⁶⁶ Somewhat worryingly – and this is partly why I have argued that BLE lacks a theory of agency⁶⁷ – we may have a ‘sense of agency’ when we deliberate on an issue, but such deliberation does not correspond with actual behaviour.⁶⁸ Needless to say, the translation of deliberation into behaviour is an area that demands a great deal of research. The reason why CRAGs may exhibit positive climate behaviour is that they were already motivated and voluntarily engaged in collective action;⁶⁹ a regulatory framework is inapplicable in their case. Thus, it is difficult to arrive at a conclusion as to how an EET scheme may regulate sustainable engagement.

Carbon Leakage: Three aspects of carbon leakage may be filtered from the discussion on the subject in Chapter 6, namely: (a) the international problem

⁶⁴ As Matthews notes, the way a climate instrument involving individuals is framed is crucial; ‘a single word can make a difference’. Laurence Matthews, ‘Upstream, Downstream: The importance of psychological framing for carbon emissions reduction policies.’ (2010) *Climate Policy* 477, p. 479.

⁶⁵ See Chapter 5, Part I.

⁶⁶ See discussion in Chapter 4, Part III, Section D.

⁶⁷ Roy, ‘Agency as Responsiveness’, *supra*.

⁶⁸ *Ibid*, pp. 16 – 17.

⁶⁹ This of course assumes that CRAGs have sorted out thorny intra-group issues, and it also assumes that their motivated behaviour actually results in effective action in the absence of external Monitoring Reporting and Verification requirements.

of carbon leakage is distinct from the EU and Member State problems of production and investment leakage, (b) some concessions on carbon leakage appear to have been made in the shift to auctioning in the EU ETS in favour of achieving dynamic effectiveness and incentivising the use of low carbon technology, and (c) measures such as border-tax adjustments have been made to deal with the problem of leakage. It stands to reason that an EET mechanism that targets individuals and households would be comparatively advantageous with regard to the problem of carbon leakage as consumers would not discriminate among products based on where they are produced as long as they veer towards carbon neutrality. Thus, it would appear that countries would have to compulsorily accommodate a carbon price in their production process for goods and services that are consumed within the EU. There could, theoretically, be a global carbon price on commodities. Further, this would not disadvantage producers within the EU as the carbon price would not contribute to their competitive disadvantage. With regard to production and investment leakage, this account assumes parity between the products that are susceptible to leakage and the products that may be included within an EET scheme. For instance, currently, one of the industries that is highly susceptible to production leakage is cement, while there is uncertain evidence on electricity. For the sectors covered under the EU ETS, measures such as border tax adjustments are made. There would undoubtedly be a reduction of the administrative costs incurred to thwart the potential of production and investment leakage through such measures. However, there is an assumption that there would be a replacement of the EU ETS by the EET; if not, then such expenditure would have to be incurred. The benefit of reducing the potential of carbon leakage arises only when the activities inventoried in the EET are not covered by the EU ETS; for activities inventoried in the EU ETS, the administrative costs of inventorying emissions from individual and households must be accounted for. Such costs point to a more fundamental issue: to put a price on commodities depending on the countries in which they are produced amounts to a redistribution of international responsibility for internalising a carbon price. As the aviation case⁷⁰ demonstrated, implementing unilateral

⁷⁰ Case C-366/10 *Air Transport Association of America and Others* ECLI:EU:C:2011:864.

measures entails the risk of a veto supported by the claim that nation-states are entitled to price carbon in any manner they please unless they are mandated to do so under international law. In fact, the EU intervention with respect to global aviation emissions is in effect a nudge: a default carbon price under the EU ETS that performed an information forcing role on nation-states to identify an appropriate carbon price. This nudge, however, does not amount to implementing and enforcing a cap or a price. Rather, as suggested in Chapter 6, there is an incentive for the EU to require other countries to adopt stringent climate regulation to reap competitive advantages. Should this result the adoption of EU ETS equivalent regulation in other countries, then that would reduce the possibility of leakage.

The approach adopted above is to qualitatively assess the cost-effectiveness of an EET. As would be obvious to the reader, I do not engage in an attempt at comprehensive quantification, but engage in a Benjamin Franklin style of qualitative assessment.⁷¹ This may seem journalistic or un-economic, but I hope I have been able to show why the concerns pertaining to a cap-and-trade system for individuals do not lend themselves to quantitative analysis. Though the Court in *Arcelor* did not engage in a quantitative CBA with respect to firms engaging in the EU ETS, I have argued above that there is greater potential for doing so as costs may be characterised as expenditure by firms. The burden borne by consumers by way of a pass-through can also be quantified. This is however not the case for an EET: comparing entitlements, the cognitive load in bargaining, the comparative costs of implementation and enforcement including alternatives to the extensive Monitoring Reporting and Verification that the producer-based EU ETS system includes and importantly the combination of a high penalty threat and potential to benefit from a robust market. In the event there could be a behavioural ‘silver bullet’ for inspiring motivation through regulation, then several of these costs may have been offset. However, there is no evidence to that effect. On the other hand, it was argued that the benefits that an EET seemed to offer could be met using other alternatives. Given the difficulty in quantifying the net benefits of climate

⁷¹ Franklin famously liked to put down words representing costs and benefits in two columns and pondering over them over a few days. Cass Sunstein, *Valuing Life: Humanizing the Regulatory State* (Chicago: Chicago University Press, 2014), p. 1.

regulation, if an alternative to achieving similar benefits could be achieved without incurring high – and incommensurable – costs, then such a policy should be preferred.⁷² Further, as I have argued (in Chapters 5 and 6), an EET for households could adversely affect the functioning of existing climate regulation, and crowd-out potential climate regulation regarding emissions not yet covered. Thus, an EET – conceptualised as a cap-and-trade scheme for individuals and households – does not seem to be necessary or suitable.

III. CONCLUSION

“There comes a point where the costs of subclassification [of an activity] is greater than the worth of the choice offered, and that in practice it is possible to find that point...were there no costs involved in subclassifying activities, it would be best to put the accident cost of an activity on the smallest subcategory.”⁷³ The costs of classification of the interests and choices of individuals and households for participating in a mandatory EET scheme are very high.

It may be tempting to identify an individual as the ‘smallest subcategory’ and ‘put the accident cost of an activity’ on her, but it needs to be clarified that an individual is not a category. The ethical intuition behind this statement could be expressed in economic language as well: the individual is an incommensurable entity, and interpersonal comparisons are possible only in relation to some activities. An ‘emitter’ is a category identified by virtue of the price and quantity of emissions; to subclassify emitters on the basis of historical emissions of nation-states (as preferred in the UN framework), the economic strength of nation-states (as preferred by the ESD), or by the proportionality of operational costs of industrial units (as clarified by the CJEU with respect to the EU ETS) is how it is currently done in practice. The category of an emitter is also intimately linked to how emissions may be reduced; in the current framework, the reduction of emissions is associated with the liability of industrial actors, and their ability as organised economic

⁷² This is in keeping with the ‘cost-effectiveness’ rather than ‘efficiency’ interpretation provided to existing and potential targets in the EU ETS Directive.

⁷³ Calabresi, ‘The Decision for Accidents’, *supra*, pp. 733 – 734.

actors to respond to external economic incentives. A cap-and-trade system for households would not be subject to such associations. There seems to be no convincing reason to categorise an individual as an emitter or end-user for the purpose of climate regulation if other options are available – and evidence regarding their effectiveness discernible – for arresting direct and indirect emissions that seem attributable to her.

7



8 CONCLUSION

8

In the initial pages of this book, it was suggested that the behavioural choices of an individual or a household do not operate in vacuum. Thus, though voluntary climate action does not have a liability component, it is shaped by institutional choices, including historically relaxed regulation of fossil fuels. And an incentive mechanism interacts with internal motivation as well as other institutional factors. To examine the desirability and viability of an EET as a discrete policy mechanism without these factors would not be realistic, though it makes its study a lot easier. This has been a common refrain throughout: the way a discrete policy mechanism is examined informs the inferences and conclusions that may be drawn. The introductory pages clarified that the research objective is to appreciate the desirability of an EET in the light of BLE; and in the process the potential and constraints of BLE itself would have to be examined, as it has no coherent method. This is why this book has sought the indulgence of the reader to go on a tedious and meandering exploration of methods used, and the dissection of assumed analytical categories. Perhaps the day will come when such axiological inquiry through reflections while conducting research will become commonplace in BLE scholarship, but it is unusual at the time of writing these pages. The book may also be unsatisfying owing to its somewhat measured conclusion: given the institutional context and evidentiary inconclusiveness regarding

the potential of a cap-and-trade mechanism to bring about motivational change, the individual or the household is unlikely to be the best possible unit for arresting indirect or even direct emissions. I hope, however, that the reader agrees with my primary conclusion: should the science of climate change require the capturing of emissions by individuals and households, then they should be required to bear burdens. However, the individual or the household is not the most-advantaged or the least-cost bearing unit for a discrete mandatory cap-and-trade regulatory mechanism for arresting emissions. Further, such a mechanism may redistribute existing and potential responsibility of more-advantaged and lesser-cost bearing units such as firms or distributors along the supply-chain. This would be an outcome that should surely be avoided if we were to take the objective of substantial reduction of emissions seriously. While this conclusion seems intuitive, I did not arrive at it lightly. There is a temptation to inventory emissions by attributing it to households (as the European Environment Agency does), it seems morally right to take individual responsibility for climate action (as the PCT scholars assume), it is easy to overlook processes such as Monitoring Reporting and Verification in thinking about the level at which climate regulation needs to be adopted, and finally, there is a temptation to give short-shrift to the process of drawing inferences from empirical work. In the scholarship on EET-like mechanisms or in behavioural economics, it appears to me that scholars have given in to these temptations. I did too when I wrote Chapter 2 and reviewed the specific literature on the subject; this is why I had to ‘turn against myself’ to some extent, as described below.

I. REVISITING ASSUMPTIONS

I commenced writing this book with the review in Chapter 2. There are several aspects of the chapter that I think are informative and instructive. With respect to policy interest and scholarly suggestions on how to engage individuals in a mandatory trading scheme to mitigate climate change, I have tried to provide an exhaustive account. Further, issues of public acceptability, political acceptability, scope of an EET, fairness concerns were culled from the literature that have been explored throughout the book. Other than re-thinking and reconceptualising these issues, I made several assumptions and have been revisiting them throughout the book. The most explicit revisionary

exercise is re-examining the benefits and burdens of a mandatory cap-and-trade scheme for individuals and households undertaken in Chapter 7, where I revise some of the suggestions made in Chapter 2. In addition, there are three substantial assumptions I had made based on the literature I had read; to revisit these assumptions is to also interrogate the sources that informed these suggestions:

Assumption 1: The individual or the household is the end-user for emissions regulation. This was based on EEA categorisation of the residential sector as a discrete category of direct emissions, as well as the literature surrounding PCT schemes. Following this assumption, it seemed unproblematic that emissions from individuals and households need to be regulated. The reason I had decided to use the phrase end-user in Chapter 2 is not to establish it as an emissions category separate from individuals and households, but to extend the sectoral and geographical scope of a PCT. In effect, this assumption attributed causality and responsibility to the individual. It was only after I understood that consumption is situated within the entire complex of agents and processes of the carbon economy, that double counting is a compelling problem, and that regulation is not just administration but also involves questions of distribution of liability and cost-effectiveness that I realised that the end-user can indeed be a legal fiction: a constructed regulatory category. Studying the inventorying and accounting of emissions by the IPCC and MRV Regulation in the EU (discussed in Chapter 6) allows an appreciation of the institutional set-up to account for direct emissions, and how administration and attribution of responsibility are linked to the producer-based model.

Assumption 2: Once administration and transaction costs are reduced we can have an efficient emissions trading scheme for individuals. Reading Coase and Calabresi, and the several debates and commentaries around their work opened my eyes to what they wanted to say: the real world has costs that can't always be modelled or even identified by a social planner, let alone reduced. Rather than working towards a zero transaction cost world where rational actors can be efficient, it is better to concentrate on solutions in a non-ideal world. The fundamentally different analytical route taken by Richard Posner and George Stigler in rejecting initial distributive situations and working towards a normative model of efficiency became

clear to me when Coase likened Posner's understanding of Coasean L&E as 'a boa-constrictor that slobbered over its victim before swallowing it',¹ and when Calabresi showed the serious constraints of defining efficiency on one hand, and the futility of spending intellectual energy in defining transaction costs. As Calabresi clarified, 'the essence of Coase's insight is that transaction costs are no different from any other cost';² they are 'impediments to a better life'.³ Oddly, it was in a footnote that Calabresi provided the clearest taxonomy of what such impediments could be: "...the cost of information to each party, the absence of psychological or other impediments to acting on the basis of available information, the administrative costs of shifting losses, and the extent to which parties actually bear the costs which the particular tests impose on them."⁴ The fact that such overwhelming multifarious costs exist is far more important than categorizing such costs into different boxes such as administrative costs and transactions costs. As both Coase and Calabresi have argued, it is completely possible to think reasonably about reducing costs in a world where such impediments cannot be overcome, or where they do not become zero. This is why Coase in *The Nature of the Firm* advocated forming a firm to deal with impediments in the market, and in *The Problem of Social Cost* stressed on the comparative cost-effectiveness of markets, given the irregularity and uncertainty of top-down judgements on nuisance. It was Calabresi who showed that it is perfectly possible for markets to function in a world of positive transaction costs. Rather than stressing on how transaction costs can be reduced, Calabresi concentrated on distribution of entitlements to agents in a manner that would allow those agents with comparatively lower transaction costs to participate in the market. Such distribution is done through assignments and allocation thus rendering the 'independence condition' of irrelevance of allocation unhelpful.

¹ Ronald Coase, 'Coase on Posner on Coase' (1993) 149 *Journal of Institutional and Theoretical Economics* 96.

² Calabresi, 'The Pointlessness of Pareto', *supra*, p. 1218.

³ *Ibid*, p. 1219.

⁴ Guido Calabresi and Jon Hirschoff, 'Towards a Test for Strict Liability in Torts' (1972) 81 *Yale Law Journal* 1055, p. 1059, fn 17.

Assumption 3: Behavioural Law & Economics is about identifying psychological obstacles to rational behaviour, and once we know about them, then we can behave rationally. This line of thinking (similar to efficient behaviour in a zero transaction cost world above) was intuitively appealing to me. When I started my PhD, I loved the idea of being able to overcome my constraints, be a successful market participant, and reduce my emissions in a rational manner. Unfortunately, the epistemic methods and theoretical outlook of behavioural economics do not match this desire. Experiments on biases do not constitute a science on ‘how to become rational’. It took me quite a while to come to terms with this, I had to see what psychological experiments can demonstrate (and what they cannot), how psychology is used in economics and then for regulatory choices. I understood why BLE scholars have a profound interest in epistemology and questions on agency and autonomy that are usually reserved for philosophers. It is because they’re trying to grapple with a situation where there is evidence of irrationality, but there are no direct inferences for regulation that can be made from such evidence. It shouldn’t come as a surprise that negotiating shades of paternalism is integral to BLE scholarship. The thrust of BLE is essentially to find alternatives to markets, or make life easier for people interacting in markets. In a sentence, BLE cannot make an individual into a firm. In this respect, it does not displace the institutional focus of Coase or the organisational focus of Herbert Simon. Simply put, behavioural economics provides further evidence of the problems inherent in the Stigler-Posner economic analyses of law, and adds support to the Coase-Calabresi way of doing L&E.

Revisiting the above assumptions allowed for some of analytical moves in this book to come to the fore. ***Firstly***, interdisciplinarity is not ‘let’s do more science’, but is an analytical process of categorisation and recategorisation (Chapter 1), testimonial exchange and reductionism in legal decision-making (Chapter 3) and drawing inferences (Chapter 4). The behavioural axiology that I adopt in the book allows me to re-think the framing of the key challenges of EET as well. ‘Public acceptability’ (studied through the examination of preferences) is rethought as ‘public responsiveness’ (studied through the examination of behaviour). ‘Political acceptability’ studied through the preferences of regulators is partially defended owing to the anchoring provided by reason (unlike individuals, regulatory opinion does amount to regulatory

behaviour). However, ‘political behaviour’ may also be analysed by examining political economy concerns following a public choice approach. The BLE inclination to relax the rational actor axiom may be extended to public choice inquiry by relaxing the rationality assumption of strategic political behaviour and introducing the (albeit speculative⁵) suggestion of discursive capture. **Second**, thinking about regulation as a mechanism of shaping behaviour rather than just facilitating market exchanges through economic incentives or imposing constraints through liability allows for a re-think of how we view regulation. If we view climate liability as playing a corrective and deterrent role⁶ and climate regulation as a collection of cost-effective mechanisms of shaping behaviour given institutional constraints (Chapter 6), we can think about the EU ETS as a liability rule (a fixed cap, a hard penalty and reparation rule) coupled with a market mechanism for price-discovery (Chapter 5). More importantly, following Calabresi, identifying the least cost avoider for complying with liability and the market-based implementation mechanism is itself a cost that cannot be ignored. I have tried to show in this book how the EU ETS reconciles distribution and implementation while allowing transaction costs to be commensurable. The same cannot be said for a cap-and-trade system for individuals. The institutional arrangement of the EU ETS may be said to have set in a ‘desirable path-dependence’ of iterative governance, following which it may be practical to distribute additional responsibility to industrial actors even for the activities of individuals and households. Should some other actors such as utilities distributors be at a distributional and cost advantage to arrest direct and indirect emissions, then they should be the

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- ⁵ This book is admittedly replete with unusual speculative analytical exercises. It does not have an overarching organising principle and though engages in empirical inquiry, does not claim to be a collection of empirical findings. Given the increased specialised technicality of both legal scholarship and publishable economic studies, it is easy to question whether speculative analytical inquiry is real work. I have found solace in Coase: ‘Faced with a choice between a theory that predicts well but gives us little insight into how the system works and one which gives us insight but predicts badly, I would choose the latter.’ Coase, ‘How Should Economists Choose?’, *supra*, p. 6. Coase also presciently notes that any measurement using quantitative and qualitative studies ‘perform a function similar to that of advertising’; one must not lose sight of the fact that they are in the service of ‘competing theories’. *Ibid*, p. 17.
- ⁶ Michael Faure and Marjan Peeters, ‘Concluding Remarks’ in *Climate Change Liability* (Cheltenham: Edward Elgar 2011), p. 258.

focus of regulation. *Third*, incurring the administrative costs of identifying appropriate units of regulation and assignment of liability saves on the costs of determining a carbon price as well implementation and enforcement costs by identifying parties who can effectively bargain in a market system (and thus avoid liability). The so-called independence condition or the irrelevance of assignment of liability is not only inapplicable in a world of positive transaction costs, but may well be a costly principle to adopt. Admittedly, the Coasean suspicion of governmental failure may hold true in the event a regulator is called upon to deal with complex issues such as calculating the price of carbon. However, as Calabresi clarified, the assignment of liability does not need to mirror a price. The administrative costs of regulated liability do not need to be high. *Fourth*, mandating individuals to engage in climate policy involves tricky negotiations of means and ends; much like the ethical inquiries undertaken by BLE scholars, questions regarding freedom are inescapable. In this regard, the heuristic device of proportionality was found to be useful in thinking through the balancing of deontological and consequential concerns. Following the BLE interest in situated choices and public interventions in looking after individual interests, I argue that there is no inalienable entitlement to pollute, but an entitlement to be free from climate harm. To this end, individuals may be required to bear burdens such as costs that are passed through, but may not be required to bear the brunt of liability, or be required to behave like firms, given that BLE provides limited guidance in developing agency (Chapter 7).

II. SCOPE FOR FURTHER RESEARCH AND RECENT SCHOLARSHIP

There are admittedly several unresolved issues in the thesis, some fundamental, and some more practical. Compatibility of a deontologically focused ‘most advantaged agent’ (per Caney) and consequentialist least cost-avoider (per Calabresi) can be established by concentrating on the role of industrial actors with respect to a producer-based territorial regulatory framework. Once the process of consumption is viewed as the transformation of materials and energy, it is not necessary to point fingers at or find a way to motivate the individual or household. However, from a strictly deontological perspective,

the producer-based territorial model embraced by the IPCC in itself is also subject to critique, given the historical global inequality of benefits reaped by some industrial actors in collusion with some States.⁷ The same argument may be made with respect to agents within the EU. It should come as no surprise that after all these years the distribution of burdens through Common but Differentiated Responsibility (CBDR) at the international level, and effort-sharing at the EU level are hotly contested, primarily because there is no apolitical answer. Among more micro issues are whether there could indeed be a solution to the Double Counting problem in the event Direct Emissions from households could be measured. I have argued that given the end-user could be viewed as a legal construct, it does not really matter. Further with respect to the liability component of a cap-and-trade mechanism and enforcement issue, I have argued that there does not seem to be any compelling justification for directly engaging individuals in an EET policy. But assume for political economy reasons (such as the ability of influential actors to negotiate the distribution of liability and burdens), the future of the planet rests with direct involvement of individuals. In such a case, the Double Counting problem would have to be resolved. Similarly, the question of what motivates individuals and households to be climate rational would have to be understood better: especially given that piecemeal experiments shed sparse light on how to make individuals rationally engage with climate regulation. That the assessment and responsiveness to risk has multiple informants and mediators is not news, but should the need arise to shape the responsiveness of individuals through regulation, my inclination is that studies that do not encounter difficulties in translating into policy would be the way forward. Further, though I have pointed to the necessity of a proportionality analysis, I have not addressed whether a mechanism such as the EU ETS or a gasoline tax would be more desirable in relation to the distribution of benefits and burdens. In fact, if we were to take the BLE axiom that behaviour is not explained by quantitative rationality seriously, then it makes sense to ask distribution of *what*? A nuanced taxonomy of the distribution of burdens,

⁷ See Dipesh Chakrabarty, 'The Climate of History: Four Theses' (2009) 35 *Critical Inquiry* 197.

benefits and capabilities that could assist with appreciating the actual impacts of policy instruments is much needed.

Having said the above, there is a modest but compelling body of scholarship on the issues discussed in this book that emerged while it was being written. I take the liberty to discuss some of them below, and in the process clarify some of the arguments mooted.

Vihersalo examines the EU ‘You Control Climate Change’ campaign⁸ through the ‘analytical tools’ of the consumer and citizen.⁹ She first makes a distinction between the consumer and the citizen as the subject of climate regulation, arguing that it would be myopic to consider the individual as a mere consumer. Rather ‘citizenship’ could be seen as an ‘analytical tool’ (methodologically somewhat similar to the analytical category of an ‘end-user’ used in this book) for thinking about the relationship between climate change and the individual. The idea of the citizen is amenable to be viewed in terms of duty; she argues that the EU’s campaign is much like a state-level campaign to make individuals view themselves and act in a certain way: they should be morally motivated to look out for their personal economic benefit, reduce emissions in the context of their lifestyles, and conserve nature.¹⁰ Viewed in this way, the ‘CO2 citizen’ is an apolitical private individual endorsing frugality when she achieves a minor economic benefit such as saving on an electricity bill¹¹ (or in the case of a PCT, a minor possible economic gain). This would go against an idea of a citizen as a political creature who has the agency to pursue the ends that she considers valuable, or participate in the life of the law; the concentration on being environmentally conscious endorses the assumption that personal responsibility is a good regulatory choice. This deflects from the idea of a citizen as having a role in politically deciding on ‘the preconditions for responsibility’, i.e. whether actors have the ‘ability,

⁸ Commission, ‘Climate Change Campaign “You control climate change”’, Memo/06/218, Brussels, 29 May 2006. Available at: http://europa.eu/rapid/press-release_MEMO-06-218_en.htm.

⁹ Mirja Vihersalo, ‘Climate Citizenship in the European Union: Environmental citizenship as an analytical concept’ (2017) 26 *Environmental Politics* 343.

¹⁰ Ibid, p. 349.

¹¹ Ibid, pp. 355 – 357.

purpose, and opportunity' to be responsible,¹² and it serves as a 'diversion from the responsibility of others.'¹³

The constant (and admittedly repetitive) use of the word 'situated' in this book is an attempt to avoid the danger of looking at agents involved in climate regulation as atomised apolitical individuals. Moreover, in keeping with Vihersalo, a practical example of how responsibility could remain unquestioned and deflected was provided in Chapter 5: the focus was brought to climate regulation as a mechanism for the distribution of responsibility, and the possibility of an emissions trading scheme for households was shown to be a mechanism that seeks to either shift (for existing mechanisms) or avoid (for potential mechanisms) climate liability. Yet more specifically, in Chapter 6, the assessment of the contribution of households to total emissions by the European Environment Agency was questioned. Further, it was argued that the producer-based territorial accounting model was suitable for climate governance, especially in the context of a quantity-based cap-and-trade mechanism.

Vihersalo does not analyse the mechanisms of assessing household contribution to total emissions,¹⁴ and her article does not go into specifics of accounting mechanisms and governance of households or individuals. This is done by Afionis and others, where production-based and consumption-based accounting mechanisms are compared,¹⁵ with the conclusion that the consumption-based accounting method is 'unlikely' to displace the producer-based model, and the desirability of the consumer-based model is contingent on further research on issues such as shared responsibility.¹⁶ In this book, it has been argued that the idea of causal responsibility is contestable, and consumption habits and preferences of individuals and households are

¹² Ibid, pp. 349.

¹³ Ibid, p. 358.

¹⁴ She does, however, question the assumption of causal responsibility for emissions from households and private vehicles in the calculations used in the EU Climate Campaign. Ibid, p. 348.

¹⁵ Stavros Afionis, Marco Sakai, Kate Scott, John Barrett and Andy Goulson, 'Consumption-based Carbon Accounting: Does it have a future?' (2017) 8 *WIREs Climate Change* 1.

¹⁶ Ibid, pp. 14 – 15.

contextually situated. This is why a fictional though practical ‘least-cost avoider’ and ‘most advantaged’ perspective of the end-user was adopted, and this perspective does not support a shift to individual responsibility or the replacement of the producer-based territorial model with a consumer-based model. Can the two models be compatible? In this book it has been argued that politically a focus on individuals and households could substitute existing and potential climate regulation designed to assign responsibility according to the producer-based territorial model. Further, issues such as double counting seem almost impossible to resolve if both systems are in place.

Heindl and Kanschik argue that there would be a ‘strong interaction’ between a quantity-based mechanism such as the EU ETS and individual mechanisms based on ‘sufficiency’,¹⁷ defined as ‘the reduction of consumption on an individual level in order to contribute to ecological sustainability.’¹⁸ Heindl and Kanschik argue that when sufficiency is voluntary, then there might be a case for curtailing the negative effects of quantity-based policy mechanisms on voluntary sufficiency. This is contingent on whether ‘ancillary ecological benefits from individual sufficiency beyond the existing standard policy will be effective’.¹⁹ However, ‘non-voluntary sufficiency’ would have ‘limited relevance for policy-making, or it is incompatible with the values of a liberal and pluralist society.’²⁰ In Chapter 7, I try to tease out the intuition that a ‘non-voluntary’ mechanism for involving individuals and households can be disproportionately restrictive. I conclude that the demands of climate change may require individuals to adopt burdens, but it is not necessary to impose a mandatory cap if the direct or indirect emissions can be arrested using other mechanisms. Regarding voluntary sufficiency, Vihersalo (mentioned above) argues that the benefits from a citizen-centred mitigation policy are ‘superficial’;²¹ accordingly, it may be unwise to give up the benefits

¹⁷ Peter Heindl and Philipp Kanschik, ‘Ecological Sufficiency, Individual Liberties, and Distributive Justice: Implications for policy making’ *ZEW Discussion Papers* No. 16-023, 2016, p. 14.

¹⁸ *Ibid.*, p. 2.

¹⁹ *Ibid.*, p. 16.

²⁰ *Ibid.*, p. 15.

²¹ Vihersalo, ‘Climate Citizenship in the European Union’, p. 351.

of a standard quantity-based policy mechanism for the sake of ecological sufficiency. Finally – in keeping with the value of voluntariness – can we not contemplate a discrete voluntary cap-and-trade mechanism for individuals and households? Rather than the liability-based market mechanism that characterises the EU ETS?

In a recent paper, Spash and Theine emphatically conclude: ‘Despite their fast growth, voluntary carbon markets appear at best a dubious means for addressing human induced climate change, even if purely a supplement to government policy.’²² They critique the operation of carbon markets in general, and show that a voluntary individual market would operate like an offset market (in the absence of a mandatory cap). Offset markets are characterised by the primary problems of information and validity; given that information about determining the quality of the offset is private, there is an incentive to relax environmental integrity.²³ Extending offset markets to individuals is especially problematic: participants in such a market will have to assess all relevant information, can lead to motivational crowding-out and thus do more harm than good,²⁴ in addition to several ethical and distributional issues.²⁵ In several respects, Spash and Theine arrive at similar conclusion as this book, though they reason differently. The primary difference being I do not necessarily see something intrinsically wrong with carbon markets, especially something like the EU ETS that has a liability mechanism built into it. In some respects, Spash and Heine are more brazen about the difficulties of individual emissions trading than I am: the point of participating in such schemes could be to ‘clear one’s conscience’ without an eye for actual environmental consequences.²⁶ Other than that, there are several substantive points of agreement. In Chapters 1 and 2, I expressed hesitation in endorsing a voluntary emissions trading scheme. Essentially, I argued that all ‘voluntary’ action has a contextual background, and a ‘cowboy

²² Clive Spash and Hendrik Theine, ‘Voluntary Individual Carbon Trading’ *SRE-Discussion Paper* 2016/04, 2016, p. 36.

²³ *Ibid.*, p. 20.

²⁴ *Ibid.*, pp. 20 – 29.

²⁵ *Ibid.*, pp. 29 – 36.

²⁶ *Ibid.*, pp. 23 - 24.

market' of allowances for household emissions is not desirable. In Chapters 3, 5 and 6, I show that an emissions trading scheme such as the EU ETS is moderated by a quantity-based cap, enforced by way of a high penalty and requirement for reparations; thus a voluntary 'cap-and-trade' scheme is a contradiction. An equivalent to enforcement in a voluntary scheme may be found in individual choices and social norms. In Chapter 4, I suggested that social norms shape individual preferences and choices, and accordingly the effectiveness of a voluntary scheme would depend on conformity with social norms.²⁷ The nature of social norms, and conformity of individual choices with social norms cannot be assumed. Methodologically, Spash and Heine are measured in making regulatory inferences from experimental studies. They question the relevance of psychological studies on household metering for understanding the responsiveness of households to a trading system.²⁸ Most of this book has focused on this point of assessing the suitability of empirical work for regulatory inference.

III. PARTING THOUGHTS

There are two popular BLE jokes:

One behavioural psychologist stops another for a chat and asks: 'Hello. How am I doing?' The other psychologist answers confidently: 'You are doing well. How am I doing?'

There are these two young fish swimming along, and they happen to meet an older fish swimming the other way, who nods at them and says, "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes, "What the hell is water?"²⁹

The point of the first joke is obvious: we do not know ourselves, so we need an observer to tell us. And yet it is funny because there is an irreverent undercurrent to it: can it really be that we do not know ourselves at all? The

²⁷ So would a non-voluntary scheme; and my study suggested that it is not easy to infer the extent a policy intervention such as an incentive can displace or shape social norms.

²⁸ Spash and Heine, 'Voluntary Individual Carbon Trading', pp. 21 - 22.

²⁹ David Foster Wallace, 'This is Water', Kenyon College, Commencement Speech, 2005.

second joke has been used by Sunstein to argue that we are oblivious to the forces that shape us, and this calls for intervention to look after us;³⁰ in effect the basis of libertarian paternalism. The potential of these jokes on the way economic analysis of law is thought about is profound: we cannot take the rationality-based strategic agent for granted. And this in turn leads to a deeper problem: economic studies premised on individuals behaving strategically in response to incentives and conducting exercises in aggregation based on microeconomic equilibrium analyses are now up for questioning. The very possibility of measuring a Pareto superior move as a situation where everyone gains financially is also in question: is a financial gain equivalent to any other form of loss? If we take these ideas seriously, then the economic analysis of law is no longer the same. It could be suggested that this critique does not need to be radical. If behavioural economics can systematically identify biases, and if we can model these biases, then we can ‘account’ for them, and once we account for them, then we can complete a previously incomplete model of the rational actor. A more practical version of this suggestion could be: once we know about biases and we remove them, then the rational actor can compete and look out for her interests again. Unfortunately both versions of this suggestion are fundamentally incorrect. In relation to the suggestion regarding an ideal model, Kahneman & Tversky pointed out replicable instances of deviations from the rational actor model. They did not endeavour to provide a model of irrationality that can be completely accounted for. The second suggestion is yet more problematic. Behavioural economics is a fundamentally descriptive exercise and no direct inference on how to become rational can be drawn from it. This is why the solution has been to put in place nudge-like devices where a benevolent regulator who has knowledge of biases makes regulations that shape behaviour. This is why Sunstein takes pains to keep clarifying that regulation premised on behavioural economics does not erode autonomy too much, and also why his critics insist that it inevitably does. Knowing about the findings of behavioural economics does not enable individuals to overcome them and become rational. Hence the importance of ‘choice

³⁰ ‘As water is to the young fish, choice architecture is to human beings. People may not notice it, but it’s nonetheless there.’ Cass Sunstein, ‘Choosing Not to Choose: Understanding the value of choice’ (Oxford: OUP, 2015), pp. 5 – 6.

architecture'. This raises the obvious question: if people are not rational, then how can we expect regulators to be? If I am oblivious to water, how can my fellow regulator-fish (wise and old though she may be) know about it? In a brief section towards the end of *About Behaviorism*, B.F. Skinner, the father of behavioural psychology, wondered about 'the behaviorist's own behavior'.³¹ He asks rhetorically: 'has he not *decided* to write a book...does he not *urge* his readers to adopt a behavioristic point of view?'[emphases in original]³² To these questions he responds 'according to traditional definitions of self-control, happiness, decision, responsibility, and urging, the behaviourist is indeed inconsistent, but according to his definitions he is not.'³³ Skinner did not tell us what these 'definitions' or categories could be that would free the expert from being determined by unconscious forces. Neither does Sunstein. The identification of individual biases based on laboratory experiments would not either. I have suggested that this is not a reason to despair: if we truly uphold the situationist axiology of BLE; i.e. there are forces other than rational thought that shape actions and we need to understand them, then we could begin to explore phenomena such as expert inquiry or political decision-making without relying on the rational actor axiom. Much like L&E embraced cognitive and social psychology to understand and shape behaviour, it is entirely possible for BLE to embrace other epistemologies of analysing situations. In this vein, my suggestion has been that the behavioural bias of regulators and experts could be 'discursive capture'. I have also tried to articulate an analytical tool of meta-expertise as a way of avoiding regulatory bias, and concentrated on introducing some deliberative sophistication in drawing inferences about people from experiments.

Picking up on the idea of biases of experts, I come back to where I started. I mentioned in the introduction that climate change does not feature in my list of priorities. And it seems I conclude by being mostly against an EET that would make me directly liable for my emissions. Does that mean that this entire book has been an exercise in self-validation, or an example in having a confirmation bias as an anchor (in Kahnemanian terms)?

³¹ B.F. Skinner, *About Behaviorism* (New York: Alfred Knopf, 1974), pp. 246 – 248.

³² *Ibid*, p. 247.

³³ *Ibid*.

Suppose I waste too much water and consume too much gas while taking long showers that help me start my day. Suppose it becomes necessary for the planet to give up meat, and it even becomes reasonable to do so as vegetarian food might contain all required nutrients. I don't think I'll be happy if bacon and eggs are taken away from me while writing this book; it might have an absolutely detrimental effect, as they may help me remember my childhood, and provide me comfort during these lonely nights. It is not easy for someone to predict my preference formation.³⁴ The solution then seems to be to have a market: I would choose what dirty activities to perform and what not to perform. But in this regard I might have a problem with the scope of the market, how I am compared to other households³⁵ as well as the demands of a market. For instance, having a baby is one of worst carbon choices a household can make. As Berners-Lee puts it, 'Unless you will ever contemplate lighting a bushfire, the decision to reproduce is probably the biggest carbon choice you will ever make.'³⁶ I don't have a baby, so I would very much want a system that has every household with babies buy extra allowances. I don't think everyone will be happy with a carbon liability imposed on babies. Imagine also I live in a shared house where I feel socially inadequate or marginalised, it would not be easy for me to negotiate household chores, let alone participate on equal footing in collective decisions on carbon allowances.³⁷ With regard to the market itself, if I have to even think of approaching a broker or a bank to

³⁴ Hence, Schlag: "It [Sunstein's approach] does not go very far in acknowledging the social character of preference formation, the effects of the market on social construction, or the importance of class or social groups in the construction and maintenance of law and world. Methodological individualism remains in the driver's seat and the market remains the default position." Pierre Schlag, 'Four Conceptualizations of the Relations of Law to Economics (Tribulations of a Positivist Social Science)' (2012) 33 *Cardozo Law Review* 2357, p. 2370.

³⁵ This difficulty of equivalence between individuals, households and members of households have been plaguing PCT scholars; in Chapter 7 I argue that this difficulty is one of the reasons why an end-user is better conceptualised as a legal construct that is more advantaged and can avoid costs better.

³⁶ Mike Berners-Lee, *How Bad Are Bananas: The carbon footprint of everything* (London: Profile Books, 2011), p. 151.

³⁷ BLE points to the need to revisit the Ellicksonian household, where rational individuals compete to secure what they want, and efficient organisation is achieved without any institutional intervention. Ellickson, 'Unpacking the Household', *supra*.

financialise my carbon engagement, I would immediately give up and start writing another article on the credit crisis! So what then? Do we let my banal concerns destroy the planet?

As I write this conclusion late into the night, I sincerely hope that I will not be bothered by other inconveniences. I hope that my health does not fail, that my diet gives me enough energy, that the people who matter to me remain safe during this time. I want to essentially delegate my choices about everything other than writing my thesis to someone else, or hope that I function in auto-pilot mode with respect to the responsibilities of life. This, in essence, is Sunstein's archetype – that of the flustered academic who doesn't have time to think about her pension, and the university should make default rules to *relieve her of the banal matters that don't interest her but have the potential to affect her*, so she can pursue the issues that actually interest her. She can, in brief, 'choose not to choose.'³⁸ In the course of this book, I found no evidence to require or successfully fashion a mandatorily engaged individual, operating under the threat of carbon liability. This does not take away from – but rather makes the case stronger for – the robust engagement of (some) private and public actors for directly bearing the burden of taking action in response to climate change. Individuals may be required to indirectly bear some of this burden – such as the pass-through of costs by producers in moving away from a fossil-fuel economy – owing to the unwillingness and political power of privileged private and public actors. Should the least cost avoiding and most advantaged private and public actors refuse to take more robust action, then that is a distributive issue *simpliciter*; it is a microcosm of the difficulties in reaching a universal consensus on the appropriate amount of climate action, how liability for satisfying this amount may be distributed, and how such distributed liability may be cost-effectively complied with. It is not because of the failures of individuals to overcome their biases, or some administrative complexity in formulating an incentive-based scheme for households. In the EU we now take a cap-and-trade system for industrial actors for granted, but its adoption has not been an easy political process. If we cannot avoid the system from being gamed, or are reticent in extending liability to similar

³⁸ Sunstein, 'Choosing Not to Choose', *supra*.

CHAPTER 8

actors to account for emissions not yet covered, then that will be the failure of a political system that does not distribute burdens to the least cost avoider and the most advantaged agent. From my analysis, the individual does not seem to satisfy these criteria.

I hope that my reasons convince despite any confirmation bias that I have. Should they still amount to little more than rationalisation of my biases, all I can say is that I have tried to prevent 'discursive capture' by writing for and speaking in front of different communities while writing my book. In fact, negotiating different points of view became my book.

ANNEXURES

I. ANNEXURE I: EXPERIMENT

Annexure 1.1: Initial Correlations

Descriptive statistics

	Mundane task	Group	Allocated tokens		Biospheric Values			Personal details			
			TpT	TsT	TCV	GVF	EVF	AVF	Total Score	Female	Male
Observations	Nr of Words	61,0	60,0	121,0	117,0	117,0	117,0	117,0	42,0	72,0	114,0
Mean	121,4			21,8	0,2	0,5	0,3	71,0			21,4
Median	122,5			21,0	0,2	0,5	0,3	74,0			21,0
Minimum	15,0			0,0	0,0	0,4	0,1	34,0			18,0
Maximum	230,0			32,0	0,3	0,7	0,4	101,0			31,0
Standard deviation	44,0			4,5	0,1	0,1	0,0	11,9			2,4

Tests of Between-Subjects Effects

Dependent Variable: TCV

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	64,769 ^a	3	21,590	1,344	,264	,034
Intercept	151,589	1	151,589	9,437	,003	,077
GreenValueFraction	1,012	1	1,012	,063	,802	,001
EgoValueFraction	18,150	1	18,150	1,130	,290	,010
Carbondummy	,285	1	,285	,018	,894	,000
Error	1815,095	113	16,063			
Total	58684,000	117				
Corrected Total	1879,863	116				

a. R Squared = ,034 (Adjusted R Squared = ,009)

ANNEXURE 1.2: SUBSEQUENT CORRELATIONS

Analysis of variance of variable sex on carbon consumed (TCV)

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	172,971	1	172,971	9,271	,003 ^b
	Residual	2089,661	112	18,658		
	Total	2262,632	113			

a. Dependent Variable: TCV

b. Predictors: (Constant), Sex

ANALYSIS OF VARIANCE OF BIOSPHERIC VALUES, GENDER AND TOTAL CARBON VALUE CONSUMED

Tests of Between-Subjects Effects

Dependent Variable: TCV

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	231,692 ^a	3	77,231	5,344	,002	,131
Intercept	171,521	1	171,521	11,869	,001	,101
GreenValueFraction	,078	1	,078	,005	,941	,000
EgoValueFraction	3,462	1	3,462	,240	,626	,002
Sex	168,722	1	168,722	11,676	,001	,099
Error	1531,771	106	14,451			
Total	54433,000	110				
Corrected Total	1763,464	109				

a. R Squared = ,131 (Adjusted R Squared = ,107)

ANNEXURE II: SURVEY

ANNEXURE 2.1: PILOT SURVEY

List of Pilot Survey Participants (19 out of 50 respondents)

A. Participants who filled up the survey

1. Oscar Couwenberg (Professor, RUG)
2. Edwin Woerdman (Associate Professor, RUG)
3. Thijs Jong (PhD candidate, RUG)
4. Fitsum Tiche (PhD candidate, RUG)
5. Charis van den Berg (PhD candidate, RUG)
6. Lorenzo Squintani (Associate Professor, RUG)
7. Stefan Weishaar (Associate Professor, RUG)
8. Hans Vedder (Professor, RUG)
9. Goda Petrovic (Postdoc in Social Psychology, RUG)
10. Jan Willem Bolderdijk (Assistant Professor, RUG)
11. Sanja Bogojevic (Associate Professor, Lund)
12. Josephine van Zeben (Lecturer, University of Oxford)
13. Shaun Chamberlin (Managing Director, Fleming Policy Centre)
14. Aaron Maltais (Postdoctoral Fellow, Stockholm University)

B. Participants who provided comments (and reasons for declining to fill up survey)

1. Tina Fawcett (Researcher, Oxford)
2. Daniel Cole (Professor, Indiana University)
3. Åsa Knaggård (Senior Lecturer, Political Science, Lund)
4. Leonie Venhoeven (PhD, RUG)
5. Sarah Royston (Senior Research Fellow, University of Sussex)

ASSESSMENT TOOL FOR END-USER EMISSIONS TRADING

1. Professional details

- 1) Professional Position:
- 2) Are you professionally engaged with any of the following (please tick):

EU ETS	<input type="checkbox"/>
Policy measures regarding individual engagement with climate change	<input type="checkbox"/>
Policy measures for sectors not covered under the EU ETS	<input type="checkbox"/>
Voluntary Carbon Markets	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>

II. Introduction

The idea of an end-user emissions trading (EET) scheme is that each year every person in the EU is given the same number of emissions allowances for free. These received allowances would then need to be used for activities which result in carbon emissions. People who emit more than what they have received in allowances would have to buy extra allowances, and individuals who emit less would be able to sell any spare allowances.

How much does this proposed policy appeal to you?

Unattractive	Mostly unattractive	Neutral	Mostly attractive	Attractive
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

III. Scope

1. **Sectoral Scope:** Which of the following activities in your opinion should be brought within an EET scheme?

Fuel consumption for private vehicles	<input type="checkbox"/>
Electricity consumption	<input type="checkbox"/>
Gas consumption	<input type="checkbox"/>
Carbon-intensive foods (such as dairy products and meat)	<input type="checkbox"/>
Waste disposal	<input type="checkbox"/>
Land-use change	<input type="checkbox"/>

Others (please specify)

2. **Spatial Scope:** While the EU ETS operates at a supranational level, proposals to cap individual emissions are till now limited to the national level. Some have proposed that it should be at an even lower level of government. What is your opinion regarding the spatial scope of the EET?

	EU	National	Municipal/ Provincial
Capping of emissions from individuals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allocation of allowances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enforcement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Redressal of grievances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IV. Fairness Concerns

	Yes	No
1. Should participation of every EU citizen in an EET scheme be mandatory?	<input type="checkbox"/>	<input type="checkbox"/>
2. Should every EU citizen receive an equal number of allowances?	<input type="checkbox"/>	<input type="checkbox"/>
3. Should allowances be distributed to children?	<input type="checkbox"/>	<input type="checkbox"/>
4. Should people be allowed to buy/sell allowances?	<input type="checkbox"/>	<input type="checkbox"/>

5. It is unclear whether the EET may be better for some groups of people than others. In the table below, we mention particular groups, and give a reason as to why it may be fair or unfair. Do you agree or disagree?

Groups of people	Agree	Disagree
i. It is fair towards lower income groups as they can sell their allowances	<input type="checkbox"/>	<input type="checkbox"/>
ii. It is fair towards higher income groups as they can always buy allowances to keep emitting	<input type="checkbox"/>	<input type="checkbox"/>
iii. It is fair towards people who are not financially literate, as they can always voluntarily find means to engage meaningfully	<input type="checkbox"/>	<input type="checkbox"/>
iv. It is fair towards people who have inefficient energy appliances as they can shift to energy-efficient appliances, and claim the difference through selling allowances	<input type="checkbox"/>	<input type="checkbox"/>
v. It is fair towards people who live in rural areas as they have more opportunities for reducing emissions	<input type="checkbox"/>	<input type="checkbox"/>
vi. It is fair towards people who live in cold areas as they have less opportunities for reducing emissions	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
6. One suggestion that has been made is to have a judicial body allocate more allowances on a case-by-case basis if complaints are brought. Do you think this is a good idea?	<input type="checkbox"/>	<input type="checkbox"/>
7. Do you think a personal carbon tax would be more equitable than EET?	<input type="checkbox"/>	<input type="checkbox"/>
8. Do you think putting in place energy efficiency standards would be more equitable than EET?	<input type="checkbox"/>	<input type="checkbox"/>
9. Do you think offering renewable energy subsidies would be more equitable than EET?	<input type="checkbox"/>	<input type="checkbox"/>

V. EU ETS questions

1. Do you think the EU ETS is an effective policy instrument in dealing with carbon emissions? Yes/No:
2. We want to assess the arguments for and against making the EET a part of the EU ETS. Please let us know whether you agree or disagree with the following:

Arguments	Agree	Disagree
i. As the institutions are already in place, there would be lower administrative costs if the EET is part of the EU ETS	<input type="checkbox"/>	<input type="checkbox"/>
ii. There would be high administrative costs, as an EET scheme should be governed at a more local level	<input type="checkbox"/>	<input type="checkbox"/>
iii. EU ETS markets are too complex for lay people, and hence the two schemes should remain separate	<input type="checkbox"/>	<input type="checkbox"/>
iv. People would have more choices if the EET is part of the EU ETS as the market would be more robust	<input type="checkbox"/>	<input type="checkbox"/>

- v. Sectors for an EET scheme are different from the sectors covered under the EU ETS, so compatibility would be difficult
- vi. The EET covers sectors which are not covered under the EU ETS, and hence there would be no conflict

3. Do you think the EET should be made a part of the EU ETS? Yes/No:

VI. System Design

1. **Allocation:** Which of the following mechanisms do you think would work best? Please tick the chosen option.

- i) An allowance account per individual where a fixed number of allowances will be put in. These allowances would be deducted periodically for some activities (such as along with electricity bills) and automatically when transactions are carried out (such as fuel purchase). Individuals could either top-up or sell allowances depending on usage.
- ii) The only requirement would be an annual surrender of allowances, and a penalty or tax imposed if a fixed number of allowances are not surrendered. It would be up to individuals to decide how they regulate it.
- iii) Any other? Please feel free to specify

2. **Non-compliance:** In your opinion, what measure must be implemented in case of non-compliance with EET?:

Compliance options	Yes	No
Individuals should be allowed to opt-out to a carbon tax mechanism	<input type="checkbox"/>	<input type="checkbox"/>
There should be a default carbon tax imposed if there is annual non-compliance to the extent of default	<input type="checkbox"/>	<input type="checkbox"/>
There should be a high penalty to deter non-compliance	<input type="checkbox"/>	<input type="checkbox"/>

Individuals would not be able to purchase certain products unless they are able to surrender the corresponding allowances

Any other (either a combination of the options above or some other option; please feel free to specify)

3. **Administrative Costs:** What do you think are the primary concerns in relation to administrative costs if such a scheme were to be implemented?

Administrative Issues	Unimportant	Quite unimportant	Indifferent	Quite Important	Important
i. The cost of designing an allocation mechanism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. The cost of monitoring such a scheme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. The cost of enforcement and compliance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. The cost of having an opt-out carbon tax mechanism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any other:					

4. **Obstacles:** What are your views on the seriousness of the following obstacles?

Obstacles in System Design	There are more important concerns	Quite unimportant	Indifferent	Quite Important	Very Important
i. Including diverse and non-point sources of emissions (such as food, land-use)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. The spatial scope of such a scheme (regional, national, municipal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Public Participation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. The problem of double counting of emissions from people and industries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VII. Assessment

1. What do you think are the main concerns in relation to public participation of such a scheme?

Public Acceptability Concerns are	There more important concerns	Quite unimportant	Indifferent	Quite Important	Very Important
i. People are sceptical about climate change, or think it is too remote a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. It seems like rationing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. It does not take into consideration diverse social and economic conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. It requires positive motivation to engage with climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. People may be suspicious of a trading mechanism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. Uncertainty of prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any other:					

2. Would you consider an EET scheme to be an effective proposal? Yes/No:

ANNEXURE 2.2: IDENTIFICATION OF RESPONDENTS FOR SURVEY

The identification of regulators and experts requires addressal of the issue of representation. As far as regulators are concerned, the scope has been the EU. Thus, it is regulators at an EU level and a Member-State level who have been identified, and an attempt made to include all Member-States. A mixed-method selection technique has been applied for the selection of experts. The method of selection for the three sample groups is specified below:

EU Regulators

The first point of reference in selecting regulatory experts was to list the members of the Directorate General of Climate Change of the European Commission (DG Clima) listed on their official website.¹ The next point was to find members of the European Commission in other departments who work on climate change issues. For this purpose, departments in other areas of regulation with overlapping concerns, such as the Directorate General of Energy and the Directorate General of Transport were studied to find members who may be in position to contribute. Third, members engaged in regulatory impact assessment of climate change were identified. Fourth, the official directory of the staff-members of the EU was used to identify personnel engaged in different aspects of climate change regulation.² Finally, participants of the EU in the 19th Conference of Parties³ engaged in policy-making were contacted.

National Regulators

This list compiles regulators and officials responsible for climate change action in the Member States of the European Union. The method adopted for the selection of respondents is as follows:

- 1) The websites of national competent authorities responsible for climate change action are consulted, and contacts obtained from there. In the event

¹ http://ec.europa.eu/clima/about-us/chart/index_en.htm

² <http://europa.eu/whoiswho/public/index.cfm?lang=en>

³ <http://unfccc.int/resource/docs/2013/cop19/eng/inf04.pdf>

there was no specific department responsible for climate change action, members of authorities responsible for ancillary or broader actions, such as environment ministries were identified. When email addresses of members identified were unavailable, the different departments were individually contacted, and the email addresses requested.

- 2) The National Focal Points⁴ and Competent Authorities identified by the UNFCCC are identified. Specifically, the list of participants at the COP 19 is consulted as this is the most recent list available.⁵ As this list includes a large number of actors, including scientists and industry interests, not all of them are surveyed. The selected respondents are those officials who are responsible for climate change action, environmental policy, and relations with the EU.
- 3) A specific list has been released by DG Clima of national competent authorities dealing with aviation.⁶ Given our project is also interested in exploring the expansion of emissions trading to other sectors, we found that it would be useful to survey these members.

Experts

Though we initially considered grouping experts according to their different disciplinary orientations and subject of expertise, our selection bias prompted us to opt for a different approach. The steps followed for our compilation is as follows:

- 1) We first use listings in Google Scholar to filter the experts we use in our survey. The following search strings have been used in Google Scholar in order to arrive at our list of experts:
 - a. “personal carbon trading”
 - b. “personal carbon allowances”
 - c. “climate policy” AROUND “individual emissions”

⁴ <http://maindb.unfccc.int/public/nfp.pl>

⁵ <http://unfccc.int/resource/docs/2013/cop19/eng/inf04.pdf>

⁶ http://ec.europa.eu/clima/policies/transport/aviation/docs/ca_contacts_en.pdf.

- d. “climate change law” AROUND “individual emissions”
- e. “EU law” AROUND “individual emissions”

From the search strings provided above, the first twenty results from each search string was first taken into account. In the event there were co-authors for a publication, the first author was taken into account.

- 2) We list the authors who contributed to the Climate Policy Special Edition on Personal Carbon Trading, and who have not been covered in the above list.
- 3) We use the same search strings in (1) and perform a WESTLAW search to ensure that we have sufficient representation from legal scholars.

ANNEXURE 2.3: SUMMARY OF SURVEY RESULTS

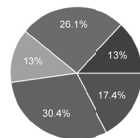
23 responses

Summary

Professional Details

Professor of Law
 professor of law and economics
 Associate Professor of Law and Economics & Co-director of the Groningen Centre of Energy Law (GCEL)
 Professor of law and economics
 Policy and Market Analyst
 Climate Expert
 Expert working on the implementation of aviation ETS. Please note that answers to this questionnaire are my personal, not official positions of my state/organization.
 University Senior Researcher
 Associate Professor of Law
 Professor of environmental law
 Senior Lecturer in Climate Law, Edinburgh Law School
 Policy Analyst
 EU Visiting Fellow at St. Antony's College, Oxford University (this Visiting Fellowship is funded by the European Commission) My former position was as Head of Cabinet (i.e. "Chief of Staff") to Mrs Connie Hedegaard, European Commissioner for Climate Action
 Senior Researcher
 Senior lecturer in academic institute
 University Research Fellow
 Lecturer, University of Groningen
 Assistant Professor of Law and Business
 Professor of Economics
 professor environmental economics
 Asst Professor

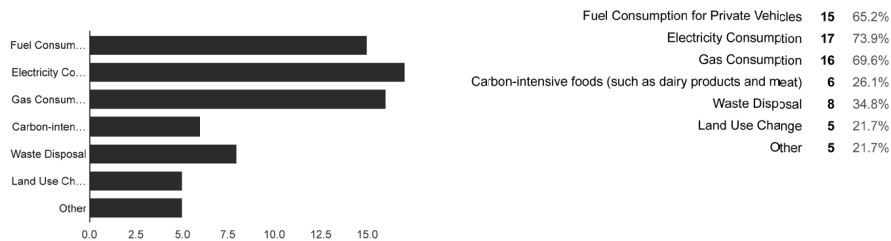
How much does an End-User Emissions Trading Scheme appeal to you?



Unattractive	4	17.4%
Mostly Unattractive	7	30.4%
Neutral	3	13%
Mostly Attractive	6	26.1%
Attractive	3	13%

Scope

Sectoral Scope: Which of the following activities in your opinion should be brought within an EET scheme?



ANNEXURES

Level of Governance [Spatial Scope: While the EU ETS operates at a supranational level, proposals to cap individual emissions are till now limited to the national level. Some have proposed that it should be at an even lower level of government. What is your opinion regarding the spatial scope of the EET?]



Capping of Emissions From Individuals [Spatial Scope: While the EU ETS operates at a supranational level, proposals to cap individual emissions are till now limited to the national level. Some have proposed that it should be at an even lower level of government. What is your opinion regarding the spatial scope of the EET?]



Allocation of Allowances [Spatial Scope: While the EU ETS operates at a supranational level, proposals to cap individual emissions are till now limited to the national level. Some have proposed that it should be at an even lower level of government. What is your opinion regarding the spatial scope of the EET?]



Enforcement [Spatial Scope: While the EU ETS operates at a supranational level, proposals to cap individual emissions are till now limited to the national level. Some have proposed that it should be at an even lower level of government. What is your opinion regarding the spatial scope of the EET?]



Settlement of Disputes [Spatial Scope: While the EU ETS operates at a supranational level, proposals to cap individual emissions are till now limited to the national level. Some have proposed that it should be at an even lower level of government. What is your opinion regarding the spatial scope of the EET?]



Fairness Concerns

Should participation of every citizen in an EET scheme be mandatory? [Please respond to the following fairness considerations]



Should every citizen receive an equal number of allowances? [Please respond to the following fairness considerations]



Should allowances be distributed to children? [Please respond to the following fairness considerations]



Should people be able to buy and sell allowances? [Please respond to the following fairness considerations]



The EET is fair towards lower income groups as they can sell their allowances [null]



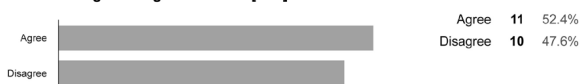
The EET is fair towards higher income groups as they can always buy allowances to keep emitting [null]



The EET is fair towards people who are not financially literate, as they can always voluntarily find means to engage meaningfully [null]



The EET is fair towards people who have inefficient energy appliances as they can shift to energy-efficient appliances, and claim the difference through selling allowances [null]



The EET is fair towards people who live in rural areas as they have more opportunities for reducing emissions [null]



The EET is fair towards people where the climatic conditions are moderate [null]



The EET is fair towards people where the climatic conditions are more extreme [null]



ANNEXURES

Other Fairness Concerns

One suggestion that has been made is to have a judicial body allocate more allowances on a case-by-case basis if complaints are brought. Do you think this is a good idea? [null]



Do you think a personal carbon tax would be more equitable than EET? [null]



Do you think putting in place energy efficiency standards would be more equitable than EET? [null]



Do you think offering renewable energy subsidies would be more equitable than EET? [null]



EU ETS Concerns

Do you think the EU ETS is the most effective policy instrument in dealing with carbon emissions?



Primary reason behind this opinion:

behavioral overload

It is a cost-effective scheme which allows actors through a market-determined price to decide whether it is cost-efficient to reduce emissions or purchase allowances.

ETS is not working

Carbon tax would be simpler and easier to administer.

It demonstrably isn't working - other policies are working

While I think end-use emissions reductions are useful, I do not think they are the most efficient or effective policy instrument. Better options include mandated equipment (vehicle, appliances, etc.) efficiency standards, electric vehicle transition planning, and renewable energy mandates that will lead to 100% RE.

This would be a remarkably complicated system that would require a huge bureaucracy to operate. Just as importantly, it would shift the appearance of responsibility for GHG emissions onto individuals, while it should rest with the large fossil fuel producers and consumers, and the governments.

A long history of practical and theoretical failure.

Important base, but needs more specific emission reduction / efficiency regulation

cost-effectiveness in reaching a given environmental outcome

Price too low

Price instability, leakage

it does not deliver enough reductions

I don't think it is possible to answer this question in a simple yes/no way

Experience

A comprehensive and global tax system would be better.

Unlike a carbon tax, relies too much on forecast of future emissions which often project unrealistically strong economic growth, undercutting stringency of ETS.

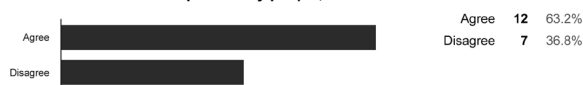
As the institutions are already in place, there would be lower administrative costs if the EET is part of the EU ETS [null]



There would be high administrative costs, as an EET scheme should be governed at a more local level [null]



EU ETS markets are too complex for lay people, and hence the two schemes should remain separate [null]



People would have more choices if the EET is part of the EU ETS as the market would be more robust [null]



Sectors for an EET scheme are different from the sectors covered under the EU ETS, so compatibility would be difficult [null]



The EET covers sectors which are not covered under the EU ETS, and hence there would be no conflict [null]



Do you think the EET should be made a part of the EU ETS?



Primary reason behind this opinion:

scope benefits

The administrative burden involved with an EET would be extremely large and have potential consequences for the operation of the broader EU ETS. There is also large doubt about how allocation/auctioning rules would be established.

EU ETS is not working therefore an EET seems a pretty bad idea

Yes, however plenty of outstanding questions remain (how to benchmark individual's emissions? administering the whole system with 500m people?)

EUETS is a waste of time. EET could be better

On a purely practical level, I think it is unlikely that individuals would have the sophistication necessary to participate in an international trading scheme. I also think that market manipulation and market vulnerability are huge concerns. Everything necessary for an efficient market - transparency, clear rules, sophisticated market participants, enforcement - would be at risk if individuals started playing in the same market.

Why hitch a new scheme to a failed one?

I consider the expected transaction costs of the EET to be too high, emission can be abated in more efficient ways

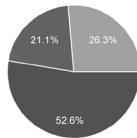
Too complex and economically inefficient, given lack of knowledge and ability to engage

ANNEXURES

Insufficient overlap
 too complex
 I don't know enough about the arguments for and against, and I don't have a detailed enough understanding of the EU ETS to be able to answer this question in a simple yes/no way
 Double Counting
 Economies of scale in regards to administrative costs
 I do not think an EET should be adopted because it is too complex and has few advantages over a carbon tax.
 administration/implementation levels
 EET deals with private individuals and EU ETS would be too complicated to use for them
 too complex
 Insufficient information.

System Design

1. Allocation: Which of the following mechanisms do you think would work best?



An allowance account per individual where a fixed number of allowances will be put in. These allowances would be deducted periodically for some activities (such as along with elect
 The only requirement would be an annual surrender

Individuals should be allowed to opt-out to a carbon tax mechanism [2. Non-compliance: In your opinion, what measure must be implemented in case of non-compliance with EET? :]



There should be a default carbon tax imposed if there is annual non-compliance to the extent of default [2. Non-compliance: In your opinion, what measure must be implemented in case of non-compliance with EET? :]



There should be a high penalty to deter non-compliance [2. Non-compliance: In your opinion, what measure must be implemented in case of non-compliance with EET? :]



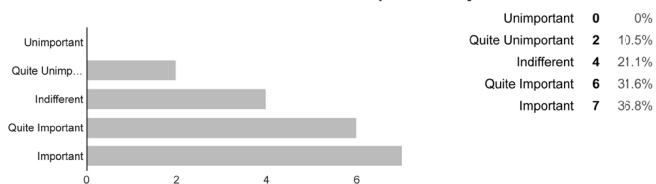
Individuals would not be able to purchase certain products unless they are able to surrender the corresponding allowances [2. Non-compliance: In your opinion, what measure must be implemented in case of non-compliance with EET? :]



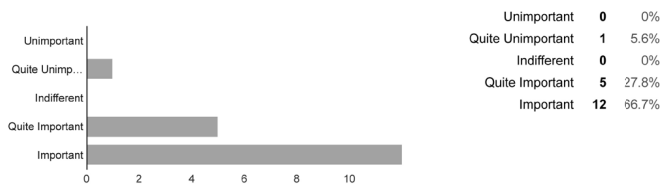
Any other (either a combination of the options above or some other option; please feel free to specify)

No opt out should be possible as this would undermine the whole system
 Needs to be enforced at energy supplier level. It's a common fallacy that a PCT system has to be enforced at user level
 Compliance requires huge bureaucracy to administer, whereas ETS requires "only" 12000 operators to be controlled
 Individuals would not be able to purchase certain products unless they are able to surrender the corresponding allowances, or pay for them at point of sale
 information provision for involuntary non-compliance
 carbon taax

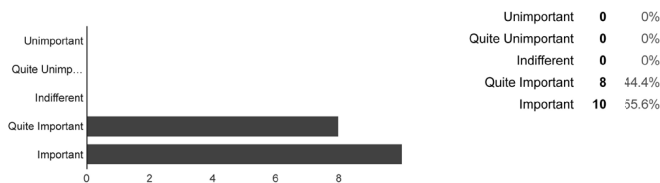
The cost of designing an allocation mechanism [3. Administrative Costs: What do you think are the primary concerns in relation to administrative costs if such a scheme were to be implemented?]



The cost of monitoring such a scheme [3. Administrative Costs: What do you think are the primary concerns in relation to administrative costs if such a scheme were to be implemented?]



The cost of enforcement and compliance [3. Administrative Costs: What do you think are the primary concerns in relation to administrative costs if such a scheme were to be implemented?]

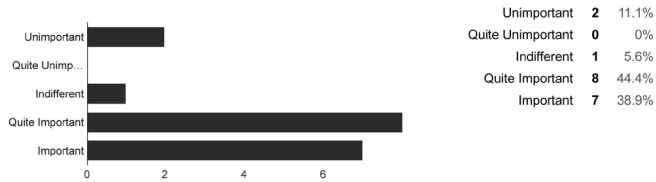


Any other? Please Specify:

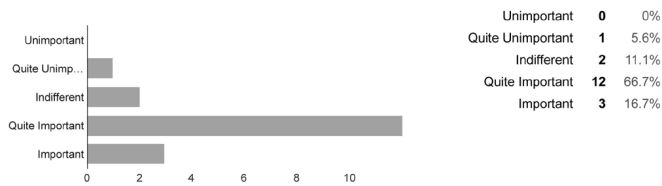
This might be the reason why it would be simply impossible to set up a scheme like this
 I would add in political cost here. I just think that people would find an EET system very invasive and they would push back against a system like this.
 These questions are unclear
 I simply don't know whether monitoring/enforcement would be difficult and therefore costly.
 Ethical Issues
 costs of distributing permits
 carbon tax (your survey's too long!)

ANNEXURES

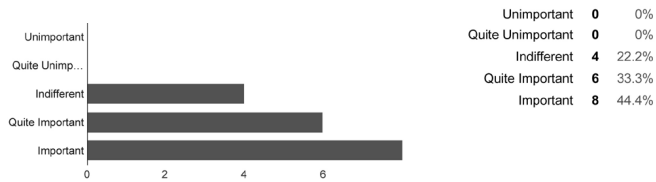
Including diverse and non-point sources of emissions (such as food, land-use) [4. Obstacles: What are your views on the seriousness of the following obstacles to system design?]



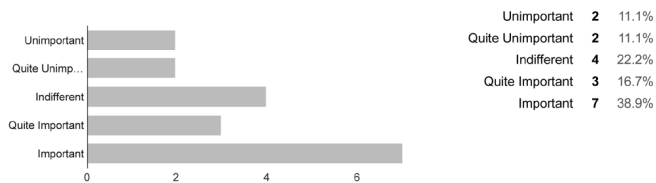
The spatial scope of such a scheme (regional, national, municipal) [4. Obstacles: What are your views on the seriousness of the following obstacles to system design?]



Public participation [4. Obstacles: What are your views on the seriousness of the following obstacles to system design?]



The problem of double counting of emissions from people (EET) and industries (EU ETS) [4. Obstacles: What are your views on the seriousness of the following obstacles to system design?]



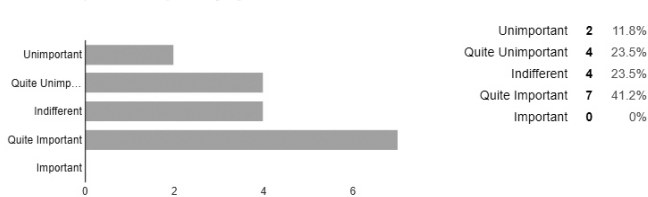
Any other? Please specify:

test

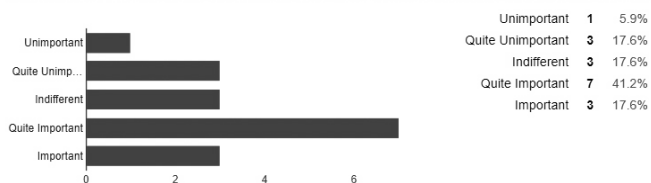
Accurate MRV needed, which would be unverifiable: for this to be done at EU level could unquestionably alienate people from the EU
Getting cross-party political support, and agreement on sensible levels of emissions allocations (cf over-allocation in Phase 1 of EU ETS)
transaction costs for individuals will be high
carbon tax (your survey's too long!)

Public Acceptability

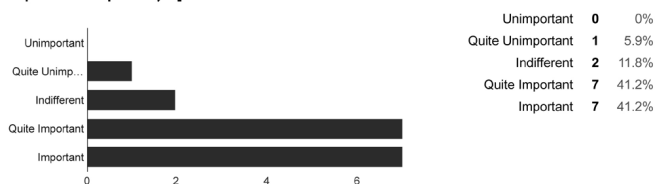
People are skeptical about climate change, or think it is too remote a problem [What in your opinion are the primary concerns in relation to public acceptability?]



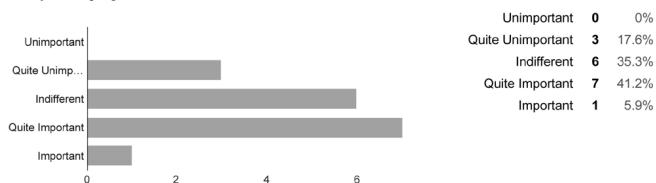
It seems like rationing [What in your opinion are the primary concerns in relation to public acceptability?]



It does not take into consideration diverse social and economic conditions [What in your opinion are the primary concerns in relation to public acceptability?]



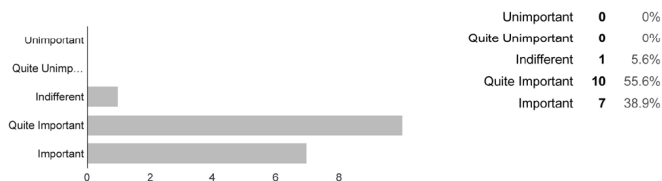
It requires positive motivation to engage with climate change [What in your opinion are the primary concerns in relation to public acceptability?]



People may be suspicious of a trading mechanism [What in your opinion are the primary concerns in relation to public acceptability?]



Uncertainty of market prices of emissions allowances will dissuade participation [What in your opinion are the primary concerns in relation to public acceptability?]



Any other considerations? Please specify:

I think the survey is already taking a lot of time

I think the issues related to equity can be resolved through the right policy design. But, the rationing idea and the potential for backlash are significant.

My mother (80 years old) would be terrified at the idea, and she hasn't got a computer to administer her liabilities... And countless other problems, such as her carbon footprint in rented accommodation not being within her control to reduce... I could go on!

People may not see it as fair to have equal allowances

It is a big step from voluntary systems mainly based on subsidies to a mandatory system with strict limitations - the transition may be difficult
carbon tax (your survey's too long!)

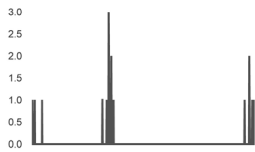
ANNEXURES

Final Assessment

Would you consider an EET scheme to be an effective regulatory proposal?



Number of daily responses



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APPENDICES

ENGLISH SUMMARY

NEDERLANDSE SAMENVATTING





ENGLISH SUMMARY

Over the last few decades, an academic consensus on the science behind anthropogenic climate change has been reached. At the same time, there is no political consensus on how such science can be put into effect. Within the European Union (EU), there is an impetus to take more action on climate change. This impetus could be attributed to political commitments in the international sphere, the pro-active role played by the European Commission, national pressure from some political parties and non-governmental organisations, and increasingly, even the judiciary. The EU has had the first-mover advantage in developing the world's most robust cap-and-trade system for greenhouse gases, the European Union Emissions Trading Scheme (EU ETS), and would seek to extend it both internationally and possibly to sources of emissions not yet included. The EU ETS has been refined over the years through different phases, and has also received its fair share of critique, primarily due to concerns regarding the price of the so-called 'allowances' that represent slices of the quantity of emissions sought to be reduced. This price has been rather low over the last few years, and could be attributed to several reasons, such as a surfeit of allowances freely allocated in the first phase, the after-effects of the economic recession and the lack of political agreement in adopting an EU-wide price floor.

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There is also a concern that though the inclusion of sources and sectors has been somewhat expanded over the years, there is a significant amount of emissions that is not included within the scheme itself. Notwithstanding, cap-and-trade seems to be the regulatory choice that will prevail for some time, and some academic and political efforts are being made to explore an extension of the EU ETS into sectors and sources not yet included. Among these sources and sectors is the household, and given the household is made up of discrete individuals, the individual. Appreciating the individual is not easy: unlike a firm where an individual operates in a formalised organisational setting, an individual or a household comprising individuals has myriad situational factors that inform his engagement with a regulatory initiative. Having said that, activities considered to be excluded from the EU ETS such as private transport, waste disposal and emissions from food seem to hinge on including the energy end-user. Can and should the end-user be included in a cap-and-trade system, and specifically the EU ETS? Along with the development of the EU ETS, there has been a parallel innovation in legal scholarship: the rise of Behavioural Law and Economics (BLE) as an analytical tool. Given that BLE focuses on providing better insight on the relationship between regulatory choices and individual behaviour, it seemed natural to use BLE as a preferred analytical tool to explore the possibility of including the individual in a cap-and-trade scheme like the EU ETS. These two concerns – the possibility of including the individual in a cap-and-trade scheme like the EU ETS, and the potential of BLE as a preferred lens to examine this regulatory option – animate the dissertation. The central question may therefore be formulated as: is it desirable to have an end-user emissions trading scheme in the EU from the perspective of BLE?

To begin addressing these concerns, it is important to review both the existing literature related to end-user emissions trading (EET), as well as the potential of BLE as a preferred analytical tool. Some research gaps emerged from the literature surveyed on EET, primarily work on Personal Carbon Trading in the UK and variants such as Tradeable Energy Quotas, notably: (i) public acceptability, (ii) political acceptability, (iii) the institutional framework within which the upstream and downstream emissions are regulated (primarily the problem of double counting), (iv) how such a scheme may be enforced, and (v) fairness considerations of including individuals. The

first two require empirical work, and the other three require an appreciation of regulatory tools (and empirical work on preferred regulatory tools), within the legal context of the EU regulatory framework. These are dealt with in turn. But before doing so, BLE is itself interrogated by describing the process of translating social science expertise into legal inquiry. BLE scholarship can be conducted not only by incorporating secondary literature on psychology into Law & Economics, but also by querying and developing analytical categories such as the famous Thaler-Sunstein invention of the *Nudge*. The motivation behind this choice of querying and developing analytical categories is primarily because BLE is not yet a coherent discipline and does not have a central axiomatic tenet. Rather, what we have instead is the development of an axiology of the non-rational actor. This requires a revision not only of the concepts used to describe behaviour in Law & Economics, but also of what constitutes relevant theoretical and empirical work. It is for these two reasons – the interest in the axiology of BLE and interrogating the way expert inquiry is used in regulatory decision-making – that the dissertation moves beyond a mere viability assessment of emissions trading for individuals, primarily by revisiting economic assumptions, analysing the meanings attributed to phrases, and concentrating on the legal inferences drawn from empirical work.

Using BLE to query analytical categories in the context of an EET allows for a re-conceptualisation of public acceptability as public responsiveness, political acceptability as political behaviour, and the end-user itself as the least-cost avoider and most-advantaged agent. The motivation behind the examination of public acceptability is to understand implementation of an EET, since direct individual engagement is essential for the success of such a scheme. The dissertation suggests that there is a difference between opinion-based public acceptability and behaviour-based public responsiveness to a policy instrument, where the latter can be examined by the experimental method. Although field experiments, economic experiments and psychological experiments can and have been employed to understand policy interventions, an inquiry into the properties of an incentive mechanism like the EET would profit from laboratory experiments. The experiment conducted was in relation to the specific question of whether the method of allocation of limited allowances in a cap-and-trade scheme for individuals would make a difference on rational decisions surrounding the use of such allowances for

activities that involve emissions. The explanatory power of this experiment for policy conclusions involves inquiry about drawing inferences, notably what can and cannot be inferred as well as the tensions and costs of drawing inferences. The particular experiment conducted yielded inconclusive results; and the only inference that can be drawn is that it fails to confirm whether loss aversion plays a role in relation to a climate change incentive.

Unlike public acceptability, it could be argued that stated preferences and opinions are important for assessing political acceptability, as reason-giving and arriving at policy positions is regulatory behavior. For this purpose, a survey (preceded by a pilot survey) of the acceptability of an EET among regulators was conducted, with a control group of experts to contrast regulatory opinion. Though the response-rate was low, both the pilot survey and the final survey yielded foundational and substantive responses. Substantively, (i) the properties of mandatory participation coupled with the trade of allowances seem essential for an EET to function, (ii) fuel, electricity and gas consumption were identified as preferred activities for inclusion, (iii) there was a general apprehension that an EET is unfair, and (iv) the need to ferret out the complex association of an EET with the EU ETS was highlighted. This final point was not dissimilar to a suggestion made in response to the pilot survey on whether it was desirable to impose the additional regulatory burden of working out an EET when the EU ETS was still being perfected. The pilot survey had yielded a foundational observation that could not be accommodated in the survey itself: political interests cannot be revealed in a survey, but need to be analytically ascertained following a political economy approach. Such an approach was subsequently adopted to think through the issues of relationship with the EU ETS, fairness concerns, and some important unexamined properties of the EET raised in the survey. The dissertation argues that the political economy of the EU ETS and other potential climate regulation would be particularly relevant in relation to the distribution of burdens: as it would be unlikely for disparate individuals and households to constitute a compelling lobby group, agents vested in the EU ETS, as well as agents seeking to avoid regulation in relation to sectors not covered by the EU ETS, would most likely try to shape the contours of an EET. To the extent the EET serves as a substitute to the EU ETS and for possible non-EU ETS regulation, agents may prefer an EET if it provides an 'opportunity

benefit'. This suggests that there may well be a disconnect between stated preferences and political choices made by regulators. However, in such an analysis, BLE seems to play no role as it is premised on rational strategic behaviour of interested agents. In this regard, it is argued that institutions and regulators could 'irrationally' assume a privileged discourse in analysis and decision-making without strategically reasoning in a particular way owing to embedded social and cultural forces; this phenomenon of 'discursive capture' is something that BLE might illuminate.

Moving on to the institutional framework within which an EET policy could operate, including the related concerns of enforcement and implementation, a subsidiarity analysis was conducted to facilitate an understanding of the competence allocation between EU institutions, Member States, citizens, and external parties in relation to the achievement of climate objectives. The legally-facilitated realisation of including fairly large installations in a cap-and-trade scheme points to the feasibility of putting in place regulation that is equivalent to the EU ETS. The core of EU climate regulation – assignment of liability to industrial units, pricing through a market and the Monitoring, Reporting and Verification of installations – is a 'producer-based territorial' model. To replace this with a 'consumption-based model' of carbon accounting and carbon responsibility would not only require a completely different regulatory framework from the one we have in the EU involving EU institutions, Member States and private parties, but would also lead to the double counting of emissions in relation to activities such as fuel consumption already covered in the producer-based territorial model. This does not necessarily render the objective of arresting end-user emissions problematic. Rather, if the end-user is conceptualised as a legal construct best placed to deal with climate change, it is not necessary to attribute the responsibility of reducing emissions to the individual or household. In fact, the commonly accepted understanding of the final consumer or household as the end-user is not an objective choice once we think of consumption as the transformation of materials and energy. Any agent could be considered the end-user for the purpose of attributing responsibility for reducing emissions; specifically, it is argued that the end-user with respect to climate regulation is the least cost avoider and the most advantaged agent. For instance, if electricity distribution utilities bear comparatively low information costs, capital costs



as well as costs of bringing about collective action, they seem to be the Least Cost Avoiders of emissions from individuals for electricity consumption. In this case, it would make sense, therefore, to categorise such distribution utilities as the end-users for emissions regulation.

Next to the above-mentioned subsidiarity analysis, the legality of a mandatory EET scheme for individuals and households was also analysed by examining whether the constraints on individuals placed by such a scheme are proportional to the objective of reducing emissions. Though individuals and households have no inalienable right to emit, they have a right to be free of harmful emissions. Being free of such emissions entails putting in place a necessary and suitable policy mechanism. After conducting a qualitative cost-benefit analysis, it is demonstrated that there does not appear to be a convincing justification for making individuals and households liable for emissions, or force them to bargain in a market framework. More suitable alternatives for arresting direct and indirect emissions may be found, primarily by re-thinking the category of the end-user, and allocating responsibility accordingly. In the event there could be a behavioural 'silver bullet' for inspiring motivation through regulation, then several of the costs of imposing a mandatory cap-and-trade scheme on individuals may have been offset by its benefits. However, the dissertation (primarily in Chapter 4) found no evidence to that effect. Rather, it was argued (in Chapters 5 and 6), that an EET for households could adversely affect the functioning of existing climate regulation, and crowd-out potential climate regulation regarding emissions not yet covered.

NEDERLANDSE SAMENVATTING

In de afgelopen decennia is een academische consensus ontstaan over de wetenschap achter door de mens veroorzaakte klimaatverandering. Tegelijkertijd is er geen politieke consensus over de manier waarop deze wetenschap kan worden toegepast. Binnen de Europese Unie (EU) bestaat niettemin de wens om meer actie te ondernemen om klimaatverandering tegen te gaan. Deze wens kan worden toegeschreven aan politieke verplichtingen op het internationale vlak, de proactieve rol van de Europese Commissie, nationale druk van sommige politieke partijen en niet-gouvernementele organisaties, en in toenemende mate zelfs de rechterlijke macht. De EU heeft een *first-mover advantage* gehad bij het ontwikkelen van 's werelds meest robuuste *cap-and-trade*-systeem voor broeikasgassen, het *EU Emissions Trading Scheme* (EU-ETS), en streeft ernaar om dit systeem uit te breiden, zowel internationaal als met emissies die nu nog niet zijn inbegrepen. Het EU-ETS is door de jaren heen in verschillende fasen verfijnd maar heeft ook flinke kritiek moeten incasseren, voornamelijk door zorgen over de prijs van de verhandelbare emissierechten die "*allowances*" worden genoemd. De prijs van deze rechten is de afgelopen jaren vrij laag geweest hetgeen kan worden toegeschreven aan een aantal factoren, zoals een overallocatie van gratis emissierechten in de eerste fase van het systeem, de nawerking van de economische recessie en het ontbreken van politieke overeenstemming over een EU-brede prijsvloer.

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Hoewel het aantal bronnen en sectoren in het EU-ETS in de loop der jaren enigszins werd uitgebreid, is er nog steeds een aanzienlijke hoeveelheid emissies dat er niet in opgenomen is. Niettemin lijkt *cap-and-trade* een regelgevende keuze te zijn die voor enige tijd zal blijven gelden en worden er diverse academische en politieke inspanningen gedaan om uitbreiding van het EU-ETS te onderzoeken naar sectoren en bronnen die er nog niet in zijn opgenomen. Onder deze bronnen en sectoren vallen de huishoudens en, aangezien ieder huishouden bestaat uit een of meer personen, tevens het individu. Het benaderen van het individu is niet eenvoudig: in tegenstelling tot een bedrijf, waar een individu werkzaam is in een geformaliseerde organisatie, is een individu - of een huishouden bestaande uit meerdere individuen - op vele manieren betrokken bij een regelgevend initiatief om klimaatverandering tegen te gaan. Bij activiteiten die nu worden uitgesloten van het EU-ETS, zoals privévervoer, afvalverwerking en emissies gerelateerd aan de consumptie van levensmiddelen, speelt de eindgebruiker van energie een cruciale rol. Is het mogelijk en wenselijk om die eindgebruiker op te nemen in een *cap-and-trade*-systeem, en in het bijzonder in het EU-ETS? Samen met de ontwikkeling van het EU-ETS is er een parallelle innovatie in de rechtswetenschap geweest: de opkomst van *Behavioural Law and Economics* (BLE) - de gedragseconomische bestudering van het recht - als een analytisch instrument. Aangezien BLE zich richt op het verbeteren van het inzicht in de relatie tussen keuzes voor regelgeving en individueel gedrag, leek het voor de hand te liggen om BLE te gebruiken als het geprefereerde instrument om de mogelijkheid te onderzoeken het individu in een *cap-and-trade*-systeem zoals het EU-ETS op te nemen. Deze twee overwegingen - de mogelijkheid om het individu in een *cap-and-trade*-regeling, zoals het EU-ETS, te integreren en het potentieel van BLE als voorkeursbenadering om deze regelgevende optie te onderzoeken - creëren dit proefschrift. De centrale vraag kan daarom als volgt worden geformuleerd: is het wenselijk, vanuit het perspectief van BLE, om een emissiehandelssysteem voor eindgebruikers op te zetten in de EU?

Om deze vraag te beantwoorden is het belangrijk om zowel de bestaande literatuur over de handel in eindgebruikersemissies te beoordelen, in het proefschrift *End-user Emissions Trading* (EET) genoemd, alsook het potentieel van BLE als te prefereren benadering. Uit studies die onderzocht werden in relatie tot EET, vooral inzake *Personal Carbon Trading* in het

Verenigd Koninkrijk en varianten zoals *Tradeable Energy Quotas*, kwamen diverse leemtes in de literatuur naar voren met betrekking tot: i) publieke acceptatie, ii) politieke acceptatie, iii) het institutionele kader waarbinnen *downstream* en *upstream* emissies gereguleerd worden (vooral aangaande het probleem van dubbelrekening, ‘*double counting*’ genoemd), (iv) de manier van handhaving van dergelijke regulering, en (v) rechtvaardigheidsoverwegingen om individuen bij een emissiehandelssysteem te betrekken. De eerste twee vereisen empirisch onderzoek, en de andere drie vereisen een analyse van regelgevende instrumenten (en empirisch onderzoek naar de te prefereren instrumenten), binnen de juridische context van de EU. Deze worden stuk voor stuk in het proefschrift behandeld. Daarnaast wordt BLE zelf bestudeerd door het proces te beschrijven van het gebruik van sociaal-wetenschappelijke expertise in juridisch onderzoek. Onderzoek op basis van BLE kan niet alleen worden toegepast door secundaire literatuur over psychologie op te nemen in een rechtseconomische analyse, maar ook door het bekritisieren en ontwikkelen van analytische categorieën, zoals de bekende Thaler-Sunstein-uitvinding van de *Nudge*. De motivatie achter het bekritisieren en ontwikkelen van analytische categorieën is vooral omdat BLE nog geen coherente discipline is en geen centraal axiomatisch uitgangspunt heeft. Wat vooral lijkt plaats te vinden is de ontwikkeling van een axiologie van de niet-rationele speler. Dit vereist een herziening niet alleen van de concepten die traditioneel gebruikt worden om gedrag in de rechtseconomie te beschrijven, maar ook van wat beschouwd moet worden als relevant theoretisch en empirisch onderzoek. Het is om deze twee redenen - de belangstelling voor de axiologie van BLE en de vraag hoe kennis van experts wordt gebruikt bij regelgevende besluitvorming - dat het proefschrift verder gaat dan slechts een analyse van de uitvoerbaarheid van emissiehandel voor individuen, namelijk door het herzien van economische aannames, het analyseren van de betekenissen toegeschreven aan zinnen, en het overwegen van de juridische gevolgen van empirisch onderzoek.

Door BLE te gebruiken bij het bestuderen van analytische categorieën in het kader van EET is een herconceptualisering mogelijk van publieke acceptatie als publieke responsiviteit, van politieke acceptatie als politiek gedrag, en van de eindgebruiker zelf als de *least-cost avoider* en *most-advantaged agent*. De motivatie achter het bestuderen van publieke acceptatie is het begrijpen van de implementatie van EET, omdat directe individuele betrokkenheid



essentieel is voor het succes van een dergelijk instrument. Dit proefschrift suggereert dat er een verschil is tussen publieke acceptatie op basis van opinies en publieke responsiviteit op basis van gedrag naar aanleiding van een beleidsinstrument, waarbij responsiviteit met behulp van de experimentele methode kan worden onderzocht. Hoewel veldexperimenten, economische experimenten en psychologische experimenten kunnen en zijn ingezet om beleidsinterventies te begrijpen, is onderzoek naar de eigenschappen van een *incentive*-instrument zoals EET gebaat bij laboratoriumexperimenten. Om die reden is een experiment uitgevoerd naar de specifieke vraag of de methode van toewijzing van “allowances” in een *cap-and-trade*-systeem voor individuen een verschil zou maken bij rationele besluiten over het gebruik van dergelijke emissierechten voor activiteiten die emissies met zich meebrengen. De verklarende kracht van dit experiment voor beleidsconclusies vereist dat men nadenkt over wat uit een experiment kan worden afgeleid, vooral over wat wel en niet kan worden afgeleid, evenals de problemen en kosten van dergelijke gevolgtrekkingen. Het uitgevoerde experiment leverde geen doorslaggevende resultaten op; de enige conclusie die kan worden getrokken is dat het niet kan bevestigen of *loss aversion* (aversie tegen verlies) een rol speelt bij een *incentive*-instrument in relatie tot klimaatverandering.

Anders dan bij publieke acceptatie zou men kunnen stellen dat geuite voorkeuren en opinies wel degelijk belangrijk zijn om politieke acceptatie te beoordelen, omdat het beargumenteren en het bereiken van beleidsposities zelf als regulerend gedrag moet worden beschouwd. Hiertoe is een onderzoek uitgevoerd (voorafgegaan door een proefonderzoek) naar de aanvaardbaarheid van EET onder beleidsambtenaren, met een controlegroep van deskundigen om de regelgevende opinie mee te kunnen vergelijken. Hoewel de respons laag was, leverden zowel het proefonderzoek als het eindonderzoek diverse fundamentele en inhoudelijke reacties op. Wat betreft de inhoud (i) lijken de eigenschappen van verplichte deelname gekoppeld aan de handel in emissierechten essentieel voor het functioneren van EET, (ii) werden brandstof-, elektriciteits- en gasverbruik geïdentificeerd als voorkeursactiviteiten voor opname in EET, (iii) was er een algemene bezorgdheid dat EET oneerlijk uitpakt, en (iv) werd de noodzaak benadrukt om goed na te denken over de complexe associatie van EET met het EU-ETS. Dit laatste punt kwam overeen met een eerdere suggestie uit het proefonderzoek over de vraag of

het wenselijk is om EET als extra regelgevende last op te leggen, terwijl het EU-ETS steeds verder wordt geperfectioneerd. Het proefonderzoek had een fundamentele waarneming opgeleverd die niet met behulp van de enquête zelf kon worden geadresseerd: politieke belangen kunnen niet door middel van een enquête worden onthuld, maar moeten analytisch worden vastgesteld op basis van een *political economy*-benadering. Een dergelijke benadering werd vervolgens genomen om na te denken over de relaties met het EU-ETS, rechtvaardigheidsproblemen en enkele belangrijke eigenschappen van de EET die nog niet waren bestudeerd maar wel in de enquête waren opgeworpen. In het proefschrift wordt gesteld dat de politieke economie van het EU-ETS en van andere mogelijke klimaatregulering bijzonder relevant is voor de verdeling van de lasten: zelfs als individuen en huishoudens een overtuigende lobbygroep kunnen vormen, zullen agenten met belangen in het EU-ETS, evenals agenten die regulering willen vermijden met betrekking tot sectoren die niet onder het EU-ETS vallen, waarschijnlijk proberen de contouren van een EET te vormen. Voor zover EET als vervanging van het EU-ETS en voor mogelijke niet-EU-ETS regelgeving kan dienen, kunnen agenten EET verkiezen als het een ‘*opportunity benefit*’ biedt. Dit suggereert dat er wellicht een verschil kan bestaan tussen geuite voorkeuren en de politieke keuzes die door besluitvormers zijn gemaakt. In een dergelijke analyse lijkt BLE echter geen rol te spelen aangezien het is gebaseerd op rationeel strategisch gedrag van belanghebbende agenten. In dit opzicht wordt beargumenteerd dat instituties en besluitvormers op ‘irrationele’ wijze een *privileged discourse* in analyse en besluitvorming kunnen aannemen zonder op een bepaalde manier strategisch te redeneren als gevolg van verankerde sociale en culturele krachten; dit fenomeen van ‘*discursive capture*’ is iets dat BLE zou kunnen benadrukken.

Met het oog op het institutionele kader waarin een EET-beleid zou kunnen functioneren, met inbegrip van de daarmee verband houdende zorgen omtrent handhaving en implementatie, is een subsidiariteitsanalyse uitgevoerd om de bevoegdheidsverdeling tussen EU-instellingen, lidstaten, burgers en externe partijen te begrijpen in relatie tot het bereiken van klimaatdoelstellingen. De wettelijk verankerde opname van vrij grote installaties in een *cap-and-trade*-systeem wijst op de haalbaarheid van de invoering van regelgeving die gelijkwaardig is aan het EU-ETS. De kern van EU-klimaatregulering - toewijzing van aansprakelijkheid aan industriële eenheden, prijsbepaling



door een markt en het monitoren, rapporteren en verifiëren van installaties - is een 'producent-gebaseerd territoriaal' model. Om dit te vervangen door een 'consumptie-gebaseerd model' van koolstofberekening en koolstofverantwoordelijkheid zou niet alleen een volledig ander regelgevend kader vereisen dan die we in de EU hebben met betrekking tot EU-instellingen, lidstaten en particuliere partijen, maar zou ook leiden tot het dubbel tellen van emissies in relatie tot activiteiten zoals brandstofverbruik die al in het producent-gebaseerde territoriale model zijn gedekt. Dit maakt het niet noodzakelijkerwijs problematisch om het doel van het beperken van de emissies van eindgebruikers te behalen. Als de eindgebruiker wordt geconceptualiseerd als een juridisch construct dat het beste in staat is om klimaatverandering tegen te gaan, is het daarentegen niet noodzakelijk om de verantwoordelijkheid om emissies te reduceren toe te kennen aan het individu of het huishouden. In feite is het algemeen aanvaarde begrip van de eindgebruiker of het huishouden als de eindgebruiker geen objectieve keuze wanneer we consumptie zien als de transformatie van materialen en energie. Elk agent kan worden beschouwd als de eindgebruiker om de verantwoordelijkheid toe te wijzen voor het verminderen van emissies; specifiek wordt aangevoerd dat de eindgebruiker met betrekking tot klimaatregulering de *least-cost avoider* en de *most advantaged* is. Als bijvoorbeeld energiedistributeurs relatief lage informatiekosten, kapitaalkosten en collectieve-actiekosten hebben, lijken ze de goedkoopste kosten-vermijders te zijn van emissies van individuen inzake elektriciteitsverbruik. In dit geval zou het dan ook zin hebben om dergelijke nutsbedrijven als eindgebruikers te classificeren voor emissieregulering.

Naast de bovengenoemde subsidiariteitsanalyse werd ook de legaliteit van een verplichte EET-regeling voor individuen en huishoudens geanalyseerd door te onderzoeken of de beperkingen op individuen die door een dergelijk stelsel zijn opgelegd wel proportioneel zijn aan de doelstelling om emissies te reduceren. Hoewel individuen en huishoudens geen onvervreemdbaar recht hebben om te emitteren, hebben zij het recht om vrij te zijn van schadelijke uitstoot. Om vrij te zijn van zulke emissies is het nodig om een noodzakelijk en passend beleidsmechanisme te kiezen. Na het uitvoeren van een kwalitatieve kosten-batenanalyse wordt aannemelijk gemaakt dat er geen overtuigende rechtvaardiging lijkt te zijn om individuen en huishoudens aansprakelijk te maken voor emissies, of hen te dwingen om op een markt te

onderhandelen. Meer geschikte alternatieven voor het aanpakken van directe en indirecte emissies kunnen worden gevonden, vooral door de categorie van de 'eindgebruiker' opnieuw te doordenken en de verantwoordelijkheid dienovereenkomstig te verdelen. Mocht er sprake zijn van een *behavioural silver bullet* voor het inspireren van motivatie door middel van regelgeving, dan zouden verschillende kosten van het opleggen van een verplichte *cap-and-trade*-regeling voor individuen gecompenseerd kunnen worden door de baten ervan. Het proefschrift (vooral hoofdstuk 4) vond hier echter geen bewijs voor. Er werd eerder beargumenteerd (in hoofdstukken 5 en 6) dat een EET-systeem voor huishoudens de werking van de bestaande klimaatregulering negatief zou kunnen beïnvloeden en mogelijke klimaatregulering ten aanzien van de nog niet gedekte emissies via een *crowding-out effect* zou kunnen ondermijnen.



